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ABSTRACT

This paper explores one problem area that hampers the introduction and acceptance of sex education in schools. Specifically, the paper reviews problems related to the human sexuality component of population education programs in the Philippines. Research on the experiences of the Population Education Program (PEP) is discussed, as well as research from other population education programs in the Philippines and other countries. Topics discussed include appropriate content of human sexuality curricula, vocabulary, teacher competence, teaching aids, and parental involvement. Research has shown that there is little agreement about how early sex education should be introduced into the curriculum, but that most programs have similar content at each grade level. PEP and other programs cover family relationships in primary grades; human anatomy and reproduction in intermediate grades; and sexual relations, pregnancy, contraception, and parenthood in high school. Research indicates a dilemma over the use of scientific, popular, or euphemistic vocabulary in sex education classes. Teacher competence should be developed through high personal qualification standards, teacher training, and team or peer teaching. Audiovisual aids, particularly those about controversial topics, should be improved. Parental involvement should be encouraged through adult education classes, printed materials, and participation in their children's class activities. Abstracts of 16 resources conclude the report. (AV)

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Population Education Research Utilization
Monograph Series 1 Part 3
May 1976

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INTRODUCING HUMAN SEXUALITY INTO THE POPULATION EDUCATION CURRICULUM

CARMELITA L. VILLANUEVA
Population Education
Research Utilization Project

Population Information Division
Population Center Foundation
Makati, Rizal, Philippines
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INTRODUCTION

This research monograph is one of the final outputs of the Population Education Research Utilization Project of the Population Information Division (PID) of the Population Center Foundation. The PID pilot-tested the concept of research utilization in cooperation with the Population Education Program (PEP) of the Department of Education and Culture to achieve these objectives:

1. To facilitate the flow of information between and among professionals at different implementation and decision-making levels in the population field;
2. To maximize the application of research results and scientific knowledge to policy planning and professional practice;
3. To gather experiential feedback from the field to help frame future policy and research.

To meet these objectives, research utilization started with a preliminary investigation of *a priori* and *emergent* problems in the field of population education curriculum development through interviews with selected key staff members of the PEP and some classroom teachers. The output of the interviews determined the necessary direction for the literature search and topics for the literature reviews. This also provided the occasion for the systematic collection of pertinent research done in the Philippines and in foreign countries. These research findings, theories and alternative models culled from research studies done here and abroad were reviewed, translated and rewritten into readable, understandable and relevant form for practitioners, administrators, policy planners and researchers in population education.

Thus, revolving around the theme "Appropriate Contents and Strategies for Curriculum Development in Population Education," three papers were written out of the literature search:

1. "Case Studies of Philippine Experience in Population Education Curriculum Development;"
2. "On the Effectiveness of the Discovery Approach as a Teaching Method for Population Education;"
3. "Problems in Introducing Human Sexuality in the Population Education Curriculum."

These papers served as the springboard for discussions in three conferences held in April, May and June 1975 to elicit the reactions and experiential feedback from four levels of population education professionals: practitioners, administrators, policy planners and researchers.

The first conference was attended by a nationwide sample of 26 teachers representing the five subject areas into which population education is integrated. They reacted to the literature reviews by comparing and testing research results against their own experiences in the field and on the applicability of these general propositions to the teachers' actual working situation. What followed were program suggestions based on these empirical propositions.

In the second conference, 19 supervisors from all over the country were asked to react to the literature reviews and to the teachers' reactions in the context of the program, organization and administrative implications.

The third conference was attended by 30 policy planners and researchers from the PEP, the Department of Education and Culture and other population-related agencies. They were asked to react to the literature reviews and to the reactions of the teachers and supervisors; they identified priority research problems and formulated policy statements which have implications on the nation's population education policy, on evaluation of the PEP program, on the types of materials that should be developed to successfully implement the national program, and on linkage with other national programs and agencies.

Based on the original literature reviews and the consolidated teachers' reactions and recommendations, the supervisors, policy planners and researchers have evolved the basic content of the research monographs. Thus, this research monograph is a more extensive and refined version of the original literature review. It has been organized into a set of empirically-based propositions, duly guided and qualified by reactions and feedback from the four levels of program professionals who participated in the series of conferences.

In this monograph, the empirically-based propositions or issues culled from research done here and abroad are presented first. Then each issue or proposition is further tested against the participants' own experiences in the field by agreement, disagreement, or doubt. Lastly, their recommendations are presented to answer the issues and the questions raised. In summary, all their reactions, comments and recommendations are interwoven with the larger issues or propositions contained throughout the literature review. Apart from this, the abstracts of all the research literature cited and reviewed are appended.

THE
POPULATION
EDUCATION
PROGRAM

Population education was introduced in the Philippines in an attempt to involve the schools in the solution of the country's population problems. The reason is simply this: the young who are the parents of tomorrow have largely been ignored and neglected by family planning activities in favor of married couples who want to limit or space their children. Population education then is a long-term measure designed to develop attitudes and rational behavior among the people toward a small family. This is not an easy task. It requires a lifetime process and a dynamic force to change attitudes and values which have been deeply rooted in culture and tradition. And this is where the school as the nation's foremost educative agency can take an active role. By including population studies in the curriculum, it is hoped that the children and the youth will develop the knowledge, attitudes, skills and the understanding needed to make rational responsible decisions regarding their behavior toward fertility and other population matters.

To achieve this end, the Population Education Program (PEP) of the Department of Education and Culture was organized to undertake a systematic and deliberate effort to involve schools in the population education of individuals. To give the program a clearer framework and direction, population education has been officially defined as "the process of developing awareness and understanding of population situations as well as a rational attitude and behavior toward those situations for the attainment of quality life for the individual, the family, the community, the nation and the world."

The program has developed a set of population education curricula to help the student appreciate the consequences of population dynamics in his immediate and remote environment and the implications of rapid population growth.

The curricula cover the following content areas: demography, determinants and consequences of population growth, sexuality and human reproduction, family planning and planning for the future.

Considering the importance of educating the young in the facts of population change, population education is introduced in all levels from Grade I and high school to college, specifically the teacher-training institutions and in the arts and science courses. Population concepts are introduced through unit integration or permeation into five mother subjects in both elementary and secondary schools – Social Studies, Science, Health, Home Economics and Mathematics.

History

Population education efforts started even before the establishment of PEP. One of the country's pioneering efforts in this field was undertaken way back in 1970 by the Bureau of Public Schools. In fact, two of the existing population education strategies now being implemented were drawn up by the BPS during its first workshop on population curriculum development in 1970. These are: (a) introduction of population education from Grade I to fourth year high school; and (b) integration of population education concepts into the existing units in Science, Health, Social Studies and Home Economics. To help implement these strategies, the first BPS workshop produced a compilation of different teaching units for elementary and secondary levels and population education concepts related to different existing units in the mother subjects.

Almost simultaneously, two private educational institutions also started their own population education programs: the Population Education Center of Philippine Women's University and the Philippine Wesleyan College.

The PEC/PWU program aimed to develop materials and acquaint teachers and students in both public and private schools with concepts and values on responsible family living. Special emphasis was given on the relationship of family size to the country's social and economic problems. Out of this project evolved materials for Grade 6, first, third and fourth years of high school.

On the other hand, the Philippine Wesleyan College's population education program stemmed from the community outreach program of its medical department which carried out family planning activities. This program consisted mainly of curriculum development for elementary, secondary and college levels.

The establishment of other institutions separately engaged in introducing population education in the schools led the Department of Education to organize PEP in 1972 as a coördinating agency for population activities in the Department. The Program was established with the assistance of the United Naions Fund for Population Activities (UNFPA) and the United Nations Development Program (UNDP).

Through the integration of population education in the curricula of all levels of the formal school system, the following long-range objectives may be accomplished:

1. That the Philippine family size norm will be reduced;
2. That decisions made by Filipinos on population matters in both the personal and social levels will be more responsible;
3. That the education program provided to students will be more relevant to their felt needs.

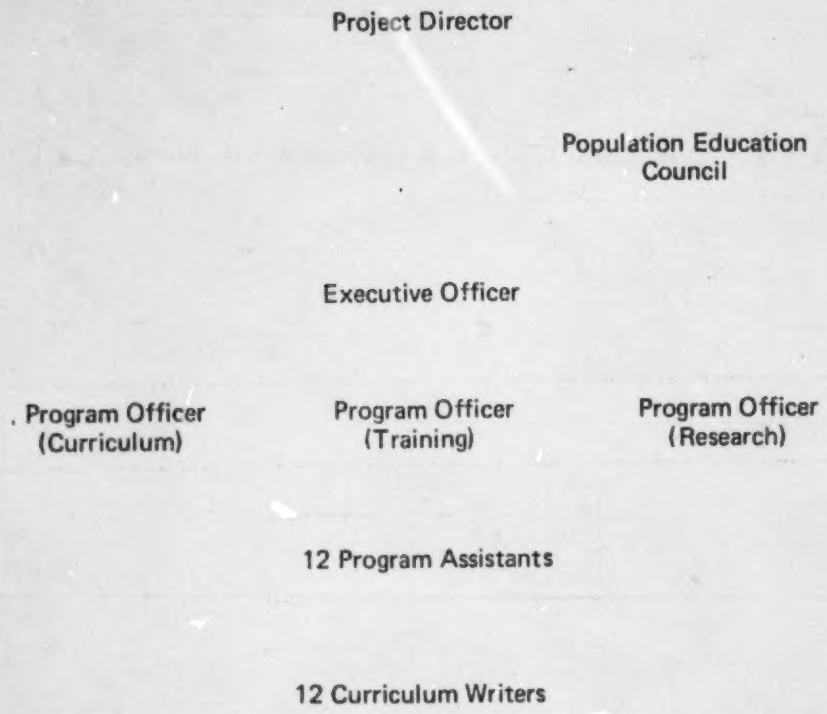
Its specific objectives are:

1. To provide instruction on population education to students of the three target levels by training 186,000 elementary teachers; 15,600 secondary teachers; and 360 teaching-training instructors in the country to implement the designed courses;
2. To develop curriculum materials for the population education content in all levels;
3. To provide necessary basis for more definite curricular changes in the formal school system in terms of content of approved textbooks, official syllabi and other instructional materials for use in the elementary and secondary courses and in the pre-service and in-service education of teachers.

Organizational Set-Up

The PEP is directly under the Department of Education with UNESCO as the executing agency. The Secretary of Education serves as Project Director in a concurrent capacity, assisted by an Executive Officer, three Program Officers, 12 Program Assistants and an administrative staff. An advisory board, the Population Education Council, has been established to

Organization of the Population Education Program


Project Director
Population Education Council
Executive Officer
Program Officer (Curriculum)
Program Officer (Training)
Program Officer (Research)
12 Program Assistants
12 Curriculum Writers

insure coordination among other agencies involved in population education and related population activities.

As shown by the Program's organizational structure, there are three main functions or components – curriculum development, training and research.

A. Curriculum Development – This unit/component is responsible for developing curriculum materials in all educational levels.

In the elementary and high school levels, the unit has developed curriculum sub-units for particular grade levels and subject areas. The population content of the curriculum materials covers five main areas: demography or population growth, human sexuality and planning for the future. The manner of introducing population education is a combination of permeation and the unit method. Sub-units in population education have been inserted into existing units in the syllabi of Social Studies, Health, Science, Home Economics and Mathematics. These sub-units, which range from several days to one or two weeks, are designed to enrich the units that will accommodate them. To help teachers in teaching these sub-units, the unit has also developed *Teachers' Guides in Population Education* and a corresponding *Background Information for Teachers.* These curriculum materials have undergone three revisions.

At the teacher training institutions, a population education syllabus has been developed for a three-unit course, which is taught as a single elective course. This is in addition to a *Resource Book in Population Education for Teacher Education* for use of those who attended the pre-service teacher training.

For other colleges and universities, curriculum materials have been prepared for the teaching of population education in the arts and sciences as a separate subject, as an integrated course, and as a seminar course.

In addition, the unit has started translating into Pilipino elementary population education sub-units in Social Studies and Health; developed pupil materials on population education; and produced 30-minute TV programs in strategies used in teaching population education in the elementary and secondary levels.

B. Training – To ensure effective implementation of the program, the training component of PEP has prepared a five-year massive training program at three levels. The first consists of a five-week training course for 720 members of the elementary level supervisory training teams (STTs) who will eventually train teachers. The second consists of a one-week training to be conducted by the STTs who will train 65 per cent of the total elementary school teachers or 187,000 teachers and 20 per cent of the total 15,600 secondary school teachers. The third consists of a five-week training course for 360 teacher-training instructors who are expected to implement the designed courses in their schools.

The STTs' five-week training course aims to provide participants in-depth background knowledge in population and population education to be able to train teachers. The one-week teachers' training program is designed to equip them with the necessary knowledge, attitude and skills in integrating population education.

As of August 1975, the Program has conducted the last of both elementary and secondary STT programs, attended by 410 elementary and 29 secondary supervisors. These STTs, in turn, held one-week training programs for 54,264 elementary school teachers; re-oriented trainors from Region 7-11 in two seminar workshops; and held the third summer training for 215 college instructors. They also conducted orientation seminars for 250 division superintendents and regional directors in the national level, and another for 1,125 school heads and school superintendents at the regional level.

C. Research – The research program has two principal components. The first concerns the establishment of a requisite theoretical background (an empirical base); the second seeks to evaluate various aspects of program effectiveness and efficiency.

In the area of empirical or basic research, the Research Unit has conducted several studies to provide baseline data for curriculum development and population education program planning to suit the needs and interests of the target audiences. Among these studies are:

1. A regional study in cultural sociology-anthropology entitled "How Children Develop Concepts of Family Size;"
2. A survey of "Family Size Preferences Among Filipino Adolescents;"
3. A study of "The Fertility Behavior of Teacher Trainees" involved in training programs;
4. A study on the "Reactions of Parents, Teachers and Laymen and Other Segments of Society Towards Certain Potentially-Controversial Population Education Content;" and
5. "Survey on Students' Knowledge of and Attitude on Population Matters in Tarlac and Pangasinan."

In the evaluative-practical area, the Research Unit has conducted regular evaluation of the training programs, both on the national and local levels. Instruments for the evaluation and tryout of curriculum materials have been prepared to secure feedback on the sub-units as fast as they are prepared.

THE
RESEARCH
UTILIZATION
PROGRAM

POPULATION CENTER FOUNDATION, INC.

The Population Education Research Utilization project was designed and implemented to test and operationalize the the basic Population Information Division core program of research utilization strategy. The strategy aims to facilitate the flow of scientific and technical information between and among practitioners, administrators, policy planners and researchers in the population field in order to maximize the application of research results to policy and professional practice.

The PID developed the Research Utilization Program to counter factors that tend to limit the application of research findings and technical information to policy and professional practice. These main factors are:

1. *The flow of research results and other technical information from researchers to practitioners and policy planners is restricted by a number of bottlenecks.* Research results are seldom used by practitioners and policy planners because: (a) the results seldom reach them; (b) if they do, they are not read; (c) even if read, they are seldom intelligible; and (d) even if intelligible, they are seldom implemented because explanatory variables in very many studies are not under the control of the practitioners or policy makers.
2. *Problems of policy planners and practitioners are seldom the starting points of research.* Unless directly contracted, researchers seldom take the problems of policy planners and practitioners as the starting point for their studies for the following reasons:

   (a) To the extent that many problems simply stem from the lack of resources, research is unnecessary;

   (b) Even where new information is needed, the action agency's self-monitoring and information-gathering capabilities often suffice to retrieve or produce the information;

   (c) Where the action agency tries to get researchers interested in its problems, researchers may find the problem trivial or otherwise uninteresting.

3. ***Research utilization has to be linked with decision-making and innovations;*** The communication and dissemination of research results are seldom planned to encourage the adoption of innovative methods in policy and practice. Research utilization involves the acceptance of new ideas and practices. Thus, it has to take into account the decision-making structure of action agencies. The adoption of innovations calls not only for the diffusion of information but also a conscious decision to adopt such methods of individuals and organizations. For some innovations, decisions can be freely made by the adoption unit; for others, such decision is contingent on earlier enabling decisions done by someone in authority; for still others, these decisions are authority decisions that simply have to be obeyed. Also, adoption decisions may be individual or collective. Given that research utilization involves the adoption of innovations and that the latitude one has in adopting innovations depends on one's position in the authority structure, the Research Utilization Program has segmented the audience of population professionals into researchers, practitioners, administrators and policy planners in terms of their capacity to make adoption decisions.

The program encompasses four major functions: (a) *research transformation* – development of a policy-and practice-relevant state of-the-art summation of scientific findings based not only on a review of the literature, but also on the feedback of professionals in the population field; (b) *dissemination* – communication through print and electronic media of these scientific findings as well as case studies to sub-audiences of population professionals; (c) *information retrieval* – collection, indexing, and abstracting of research information – in print, film or microfilm – to be transformed or disseminated; and (d) *research* – implementation of research on the flow of scientific knowledge needed to implement the basic research utilization strategy; also, when the research transformation function warrants it, further analysis (secondary analysis) of research data collected by others.

The basic unit of the program is a 12-to-18-month *research utilization cycle,* covering information retrieval, research, research transformation and dissemination on a problem or cluster of interrelated problems felt by action agencies. The Information and Research Utilization Program will concentrate in four major content areas – biomedicine, information, education and communication, population education and the social sciences.

The research utilization strategy was first pilot-tested in the field of population education. This decision was made out of the full realization that population education is a relatively new field in the National Population Program. Because it is a new program, there is a great and urgent need for policy planners and administrators to seek "valid knowledge" from research and experience. This will help them identify their needs and their problems better, plan out more relevant projects, form innovative strategies and practices which will effectively involve the schools in the solution of the population problem.

Presently, the Population Education Program of the Department of Education and Culture is engaged in a continuous process of curriculum revision. Since this is a new field, PEP believes that it is imperative to continually alter the curriculum to reflect new ideas taken from research and observation on what should be taught and how it should be taught. Similarly, the same is being done with PEP's teacher training activities. The PEP is trying various alternative training models and strategies to determine which will be the most effective vehicle for delivering population education knowledge and teaching competencies to teachers in the field. Definitely, research findings and practical experiences of other agencies and individuals involved in teacher training can serve as valuable inputs into policy planning and practice.

In the other population fields, like social sciences, IEC, biomedicine, there is a proliferation of disciplines and agencies with disparate program implementation. This is not so in education. In fact, it is only one of the few programs, which has established a central body, the PEP to plan, implement and coordinate population education activities in the whole country. Thus, the PEP has the authority and direct control over the teaching of population education in all levels – elementary, secondary, teacher-training institutions and colleges and universities – both public and private. This organizational structure makes for fast and centralized introduction of policies and decisions involving population education activities in all levels and sectors. Furthermore, the issuance of a Department Order or a memorandum from the Secretary of Department of Education and Culture can help facilitate and transmit these policies. Broadly speaking, the decision-making structure under which the population education program works provides a clear entry point for research utilization strategy.

Another good feature of the program, which lends itself to a research utilization strategy, is the distinctive delineation of the population education professionals into the four target audiences: practitioners, administrators, policy planners and researchers. These target audiences are mostly different from those in other population fields. These individuals, who compose a particular level of a target audience, belong to varied professions and have multiple or less identifiable functions. Such individuals can be found in IEC, or the social sciences. On the other hand, members of a particular level of a target audience of the population education program are more homogenous in roles and are easily identifiable. Examples are teachers for practitioners, principals and supervisors for administrators, superintendents and PEP key staff as policy planners. As such, the relatively simple organizational set-up for personnel and professionals facilitates the diffusion and application of innovation and research results in the field of population education.

INTRODUCING
HUMAN
SEXUALITY
INTO THE
POPULATION
EDUCATION
CURRICULUM

THE MAIN APPROACH

During the planning of the Population Education Program of the Department of Education and Culture, some curriculum authorities expressed reservations about the inclusion of human sexuality as a main approach in teaching population education in school. A majority of them, however, agreed on most of the other approaches – demography, determinants of population growth, consequences of population growth and planning for the future.

According to an educator, "the issue involved is not so much whether these topics are relevant to population education since unquestionably they are, but rather as to whether it might not jeopardize the acceptance of the program in areas where the community has reservations regarding them."1

Clashing Views

The question has given rise to two opposing views. Taking one side are Sloan Wayland and other Asian population authorities who believe that population education should be approached only in terms of demographic awareness. Sex education, they maintain, should be considered either as a separate curriculum or integrated into more relevant courses like biology and medicine. On the other side are Simmons, Arnold, the North Carolina Population Center and the Philippine Population Education Program. They see a better educational outcome in terms of more rational and desirable sexual and fertility behavior through the integration of demography, family living and sex education into the population education curriculum.

Wayland's opposition is directed more towards the conditions prevailing in the developing countries. He maintains that the problem of population growth is of overriding urgency, and all available resources should be channeled primarily towards its solution. If the attempt to include a controversial topic, such as human sexuality, in population education would endanger the program's very urgent need for action towards family limitation, then it would be wise to exclude the topic.

Furthermore, Wayland says, the factors which have led to the initiation of sex education programs in the West are essentially unrelated to those which have led to growing public concern with rapid population growth in developing countries. He adds: "Sex education as has been developed in the West is very much oriented to the special problems associated with that social structure (which has given rise to sexual permissiveness resulting in an increase in venereal disease, illegitimate pregnancies, etc.) and, as such, covers many elements which are of limited concern for societies with different structures (like countries where out-of-wedlock pregnancy is permissible). Since neither sex nor family educational approaches were developed out of an interest in the family planning objectives, they are only marginally or partially appropriate for that field. Having a full and meaningful understanding of sex and its relationship to all phases of one's life may not lead to any control of family size and one may engage in family planning with only a minimum concern about one's sexuality."[2]

This position is supported by the Population Reference Bureau which holds that there are enough circumstances where the linkage of population education and sex education will be self-defeating as to warrant their separation.

The Alternative

While Wayland proposes a population awareness approach as a viable alternative, Arnold and his group believe otherwise. They maintain that an educational program incorporating all three approaches – population awareness, family dynamics and human reproductive biology and contraception – can lead to lower fertility, an increase in the use of contraceptives, a rise in positive expectations regarding small family size, and responsible parenthood and child rearing practices.[3]

Arnold and his group question Wayland's demographic approach to teaching population education, saying that such an approach may be too abstract and divorced from a child's experience as to be effective. It is generally known that children are usually totally absorbed by their own personal experiences.

Simmons (1970) agrees that population education is a more promising means of diffusing population information than the other channels ordinarily available to the family planning program. He discusses four operational approaches in teaching population education: sex education, education for family living, population awareness and basic value orientation. He says the primary objective of integrating sex education into population education is to "teach young people to understand that the full exercise of their sexual powers is for use in a mature and responsible manner . . . to live comfortably with the phenomenon of sex, and to interpret sex into their lives creatively and constructively." He considers the possible effect of these four educational activities on "changes in family limitation behavior in the next generation."[4]

Similarly, the aim of the International Planned Parenthood Federation's responsible parenthood and sex education programs is to relate personal behavior to more general social needs and objectives. This is being done by providing people with more accurate information regarding the biological, psychological and social aspects of human sexuality. The IPPF explains this will enable them to make responsible choices about their sexual behavior and the planning of their families.

PEP's Area of Concern

The Philippine population education program evidently has been influenced strongly by the views of Simmons and the North Carolina group. The program recognizes that population education is neither family life nor sex education.

While it admits that population education and sex education are separate and distinct

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subject matters, it believes that each of these fields shares an area of concern with the other. The overlapping of content areas results in better educational objectives: through sex education, students will not only learn the full exercise of their sexual powers in a mature and responsible manner; they will also be able to make personally and socially responsible decisions about their fertility behavior through population education.

Human sexuality, as used in the population education program, is the basic understanding of the reproduction process with its biological, psychological and sociological components. Human sexuality provides awareness that family size is controllable through understanding of the menstrual cycle.[5] Under the PEP's context, expressions of sexuality go far beyond genital responses and are constantly modified due to sexual experience and learning throughout the life cycle. Physiological, emotional, social and cultural forces condition sexuality in intricate and important ways, especially during early and late childhood. As individuals mature, these influences may result in a widening range of possible attitudes and experience.[6]

The PEP succinctly summarizes its goal this way: "By integrating population education into sexuality and human reproduction, the basic understanding of the human sexuality with its biological, psychological, and sociological component will be introduced. Awareness that family size is controllable through understanding of the menstrual cycle will be developed."[7]

This view has been affirmed by most of the participants in the research utilization conferences on population education. The teachers and supervisors dismissed as unwarranted the fear that the inclusion of human sexuality would jeopardize or slow down the acceptance of the population education program. Taking the same stand as the PEP, they felt that human sexuality could not be separated from population education because knowledge of sexuality would favorably affect the future fertility behavior of students. They also noted that children are already getting information on sex from non-school sources, like their peer groups and the mass media. Before these sources could give the children erroneous notions about sex, the schools should be able to provide the children accurate information and answers to their questions on the subject.

The teachers, moreover, pointed out that parents they have talked with favor the inclusion of the subject in the population education curriculum. These parents generally agree that teachers are in the best position to teach the subject to their children.

Further supporting the PEP viewpoint were some of the policy-planners and researchers. They said that apprehensions about and controversies surrounding the teaching of human sexuality may spring from hang-ups of Western origin. They observed that Filipinos are, in fact, more open and desensitized to sex as shown by their sexual-cultural practices. For instance, mothers nurse their babies in public, rural families sleep together in a one-room hut, and children bathe nude in the river.

Despite a common agreement to include human sexuality into population education, other details on the matter have given rise to other conflicting views within the country's educational sector. One area of difference is the rationale for integrating it in population education. There are two different existing perspectives on the development of sex education in the Philippines in relation to the population program. The PEP recognizes the need for sex education to grow side by side with population education. As some PEP authorities stated: "Sex education in the U.S. was developed in response to a concern for changing sexual mores and behavior, and in reaction to an increase in the incidence of VD and out-of-wedlock pregnancies. But in the Philippines where sex education, like matters of human reproduction, would be of concern to the population educator, VD and masturbation, for example, are only of peripheral interest."[8]

On the other hand, the development of teaching guides in Family Living and Sex Education in the fourth year level by the Philippine Women's University was prompted by increasing concern about the changing sexual behavior of the youth today. The preface of the syllabus says:

"While the traditional views of parents and other lay people are to be respected, there is no doubt that the need to counteract undesirable influences on youth has never been more urgent that it is today. Our present environment is charged with sex as evidenced by the abundance of pornographic literature, ads, and films; by salacious information dished out to youth by malicious persons. Rather than have youth acquire ideas on sex from the wrong sources, the school should do the serious task of giving out such information through a carefully planned course on sex education and family living. A survey conducted by trainors in the program reveals that 9 per cent of parents interviewed are in favor of the course and that children know more about sex than adults suppose."[9]

Western Influence

These seemingly conflicting objectives in the teaching of sex education can be explained thus: the development of the population education curriculum, which includes units in human sexuality, was influenced more by the West. It grew out of the immediate need to undertake a "crash" program, instead of what empirical research says the country needs by way of sex information.

But while the importance of such topics as venereal diseases, masturbation, abortion, premarital sex and out-of-wedlock pregnancies to the population curriculum are questioned and negated, the topics are nevertheless given equal treatment in the curriculum discussion of human physiology and reproduction.

A content analysis of PEP's population education curricula shows that human sexuality is taught in Grade I, where male and female genital organs are called by their actual names. In short, calling a spade a spade. And this alone has elicited unfavorable reaction from many parents, teachers, students and religious leaders.

The idea of introducing human sexuality in Grade I comes from the West. There psychological studies have shown that at age 5, a child is just about ready to receive a minimum of sex education.

The suitability of teaching human sexuality in each grade level and the manner of integrating it have not been empirically evaluated by the PEP. But studies to determine the acceptability of sex education as a major area of population education should be accorded priority. Its highly controversial nature could jeopardize the acceptance of population education as a whole. Thus, by knowing the degree of knowledge and attitude which people have regarding the curriculum, program planners can come up with strategies which will harmonize or integrate change into the existing value structure of the community, with a minimum of disturbance and antagonism.

Planning an Effective Curriculum

As a rule, information is accepted and acted upon if it is related to the needs and desires of its intended audience. It follows then that sex education will be more functional if it is organized around the children's needs and desires, and the community where the school is located.

Ideally this can be achieved by conducting either baseline or evaluation studies on the knowledge, attitudes and behavior of students, teachers and parents regarding sex education. By knowing the amount of information or misinformation present and the degree of interest or expressed need for certain kinds of knowledge, educators can plan the curriculum.

The same studies will not only help determine the curriculum content; they will also point out the appropriate age or grade level in which to introduce specific "controversial" content, and the manner in which they might be taught.

The data included in this literature review have been from both local and foreign studies. These studies either made use of one of these

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two methods: a one-shot baseline survey through questionnaires to determine knowledge, attitudes, and practices; or pre-testing and post-testing techniques to determine changes in attitude, knowledge and behavior regarding sex education before and after the application of a sex education curriculum.

Most of the studies sought to find out knowledge, attitudes, and behavior of respondents towards sex education *per se* and not as a unit of population education. Findings of these studies are deemed useful and relevant in guiding educators in the teaching of human sexuality. This is because topics on human sexuality covered in the population education curriculum are basically similar to those covered by a purely sex education program.

Hard data are substantially supported by discussions of prototype models, results of pilot projects and experiences of other countries in the development and implementation of sex education programs. Thus, with "hard" and "soft" data, this paper brings into focus the following areas which have been found to affect the introduction and acceptance of sex education in the schools:

1. Knowledge and attitude of parents, teachers and students towards sex education;
2. Content (what, when and how to teach);
3. Vocabulary;
4. Teacher competence;
5. Parents' involvement; and
6. Teaching aids.

Local studies included in this review do not deal with just one unit of analysis, for example, the students' views or attitudes regarding the question. These studies also show how other persons concerned in the total process, such as how parents and teachers respond to the same question. In effect, the findings will show how opinions and attitudes of the three groups interact, vary, harmonize or clash. This will consequently reveal the extent of their similarities and disagreements in attitude towards specific topics on sex education, which will determine their acceptance or rejection of such topics.

KNOWLEDGE AND ATTITUDE OF STUDENTS, TEACHERS AND PARENTS

Majority of the local surveys discussed in this paper contained standard questions like: "From whom do adolescents gain knowledge on sex?" "Who is sought as the main source of sexual information by most youth?" "Are adolescents satisfied with the accuracy of information they acquire?"

These questions should have specified the answers in two places – the home and school, or from parents and teachers. Most of the findings showed that both parents and teachers generally served only as minimal sources of sex education.

In three separate studies, Vergara (1968), Tomaneng (1966) and Fonacier (1971) found that parents and schools generally failed as initial sources of sex information. Instead, printed materials like books, magazines, newspapers, some sex literature and pornographic materials tended to be the most popular sources of sex information among students. Some students explained they sought information from pornographic materials because they were not satisfied with the information they received from desirable sources like parents and teachers. They also tended to get more information from friends and peers.

The small percentage of students who referred to their teachers as the source were found to have attended sex education classes at one time or another in high school. The implication was they received their first sex instruction in high school (Fonacier, 1971; Vergara, 1968). Parents, on the average, ranked third or fourth as a source of sex information.

Factual knowledge on sex, like the parts of the human anatomy and contraceptive methods, was ascribed to sex instruction in schools. On the other hand, the moral aspects, such as behavior towards boys, origin of babies and dangers of sex and virginity, were learned from parents, especially the mothers (Tomaneng, 1966).

Majority of those who had received sex instruction in school knew about contraception in general, but were unable to describe any specific contraceptive method (Cadena, 1973).

Most students reported that their peers and printed materials provided initial information about ejaculation, intercourse, masturbation and homosexuality.

The age of achieving first knowledge on sex education in the Philippines does not differ much from that of the Swedes. The youth in these countries, on the average, receive their first formal knowledge of sex at age 13. Foreign researches also revealed that either printed materials or friends and peers rank first or second as major sources of sex information, while parents or schools rank only third or fourth (Thornburg, 1972).

Students, parents and teachers were found to have a generally favorable attitude towards sex education, with students feeling they should learn more about sex (Fonacier, 1971; Vergara, 1968; Tomaneng, 1968; Villaluz, 1971; Carcellar, 1970).

There were mixed feelings among students as to who should provide them sex education. Some high school students from the urban areas said sex should be taught in school. They considered the school as an authoritative and reliable source because most parents were not ready to answer all the questions about sex (Brondial, 1973). However, they were agreed that only well-prepared teachers should teach about sex. They said there were some incompetent teachers who often gave interpretations on sex with which the students disagreed. These same students went so far as to say unmarried teachers were incompetent to teach sex education (Vergara, 1968; Cadena, 1973). Parents were considered by some 1,000 female college students as the ideal persons with whom sex problems should be discussed (Vergara, 1968).

Parents, themselves, also believed their children should receive sex education in school, provided however that it is handled by competent teachers. To be competent in sex education, according to some 110 parents used as respondents in a study by Quesada (1974), a teacher (a) should have knowledge of the subject matter, resource materials and resource persons; (b) must be mature, healthy and have a respectful attitude towards human sexuality; (c) must have the ability to communicate honestly, clearly and sensitively; (d) must be happily married; (e) must have a high degree of warmth and affection for children; and (f) must employ non-authoritarian teaching techniques.

The same parents recognized their role in providing sex education to their children by encouraging informal sex discussions; especially on courtship and marriage. The Quesada study showed that 81 per cent of the parents felt they should give sex education to their children as they were in the best position to do so. At the same time, however, they expressed the need for instruction and guidance themselves on how to give sex education to their children. Most of the respondents wanted a seminar or conference conducted either by a family planning movement, or the school through the PTA.

Negative Reactions

During its early days, the PEP studied the reactions of a national sample of 2,093 parents and 4,550 teachers to certain "potentially controversial" population education content. This included topics related to sex, family planning and family size norms. The study aimed to find out who objected to teaching certain population education content, what they objected to, and why they objected.

At the same time, the study sought to elicit suggestions as to the appropriate age or grade or year level at which to introduce the "controversial topics," and the manner in which the topics should be taught.

The findings showed most of the parents and teachers favored the inclusion of "controversial topics" in the school curriculum. This meant the inclusion of sex terms, showing of pictures and illustrations of the sex organs and naming of the various contraceptive devices. Only 3 per cent reacted unfavorably to the inclusion of these topics.

Among the reasons given for objecting to controversial content were: (a) "School

Table 1: Parents' and Teachers' Reactions to the Inclusion of Controversial Topics on Population in the School Curriculum

Topics	Parents			Elementary Teachers			Secondary Teachers		
	Yes	No	No Response	Yes	No	No Response	Yes	No	No Response
1. Related to sex	89.92	6.64	3.44	87.01	5.86	7.13	91.61	4.69	3.70
2. Related to family planning	89.30	6.59	4.11	83.78	8.52	7.70	91.28	4.69	4.03
3. Related to family size norm	93.31	3.58	3.11	90.50	2.46	7.04	95.92	2.09	1.99
4. Related to death	70.90	21.64	7.46	72.59	16.59	10.82	74.55	17.54	7.91

N = (Parents) = 2,093
(Elementary Teachers) = 2,441
(Secondary Teachers) = 2,110

Topics Considered Controversial by Parents and Teachers

Topics Considered Controversial	Parents	Elementary Teachers	Secondary Teachers	Total
1. Related to sex	6.64	5.86	4.69	5.73
2. Related to family planning	6.59	8.52	4.69	6.69
3. Related to family size norm	3.59	2.46	2.09	2.69
4. Related to promoting death	21.64	16.59	17.54	18.48

children are too young to see, know and mention the different parts of the sexual organs and reproductive process;" (b) "Sex is ugly and obscene;" (c) "School children may become immoral and indulge in sex at an early age;" (d) "School children are too young to be told about the different contraceptive devices and their uses;" (e) "School children may become immoral with their knowledge of the use of the contraceptive devices;" and (f) "The church is against the use of contraceptive devices."

Other sectors, including some religious teachers and administrators, have opposed sex education in schools. They feared it would place the youth in moral danger and would give rise to sexual experimentation, resulting in unwanted pregnancies among the unmarried and spread of venereal disease. Even the teaching of contraceptive methods was believed by these sectors to lead to pre-marital activities.

Still others believed the youth will awaken or be unduly disturbed by exposure to sexual information when they are not ready for it. Others were more concerned about teachers who may mislead the children through emotional immaturity or are unprepared to handle sex education.

Opposition to sex education differs from country to country and from one culture to another. In some countries, information on planned parenthood can only be introduced in courses described as "family life education."

In one country it is necessary to avoid references to the word "sex" if programs are to be introduced. In another, omitting the phrase "sex education" is tantamount to misleading the people. In still another, care must be taken to avoid phrases which imply that contraceptive methods are being explained, even if they already are.[10]

In the West like in Sweden, the strongest opposition to sex education programs is political in nature. Extreme left-wing groups argue that sex education and family planning are bourgeois inventions.

In the United States, the extreme right group has launched a campaign against sex education because: (a) Sex education is a Communist plot to destroy the moral values of the youth; (b) Pornography is introduced into the classroom through sex education; (c) Sex education should not be taught without the teaching of religious morality; sex cannot be taught without teaching sin as well; (d) Exposing children to sex education in schools will cause them to experiment; and (e) Sex education should be left to the family.[11]

In Asian countries, the primary reason why sex education is difficult to introduce in school is the cultural mores and traditions which consider sex as taboo.

In Korea and Pakistan, for instance, sex information is not traditionally given until after marriage. Pakistani authorities, at the most, will allow sex education only during matrimony and in degree colleges like medicine, with the assurance that utmost care will be taken to guard against immorality. The Korean youths today, meanwhile, are a confused lot over the transition from traditional Confucian sexual taboos to greater sexual freedom, introduced from the West.

In the Philippines, students find it difficult to understand and learn the parts and physiology of the reproductive system and the genitalia. They associate these subjects with shame and guilt.

The Arab culture treats sex as a delicate subject and has not been introduced at all in schools. The one exception is the United Arab Republic, where there is no opposition to sex education but reservations exist as to when, to whom and by whom it should be given.

In Chile, ideas about normal sexual development of the child are full of taboos. A study conducted by the University of Chile indicated that the main groups of people in contact with the youth – doctors, teachers and parents – are full of prejudices on the normal child development, including such matters as menstruation, masturbation and sexual activities. To counter this, an experimental, one-month teacher-training course in sexology with a multi-disciplinary approach was developed. However, the project did not bring

Table III — Parents' and Teachers' Suggestions on When to Introduce Controversial Topics

	Grade Level														
Topics	1	2	3	4	5	6	I	II	III	IV	COLL.	NTT*	NR	A/ED	TOTA
1. Sex	2,555	70	175	341	975	732	885	65	181	191	92	53	429	0	6,644
2. Contraceptive	286	28	65	153	450	589	1,790	173	539	1,337	459	100	675	2	6,644
3. Family Size	536	41	113	318	1,234	769	1,580	133	404	560	268	28	658	2	6,644
4. Death	326	21	36	167	458	1,194	1,484	81	297	834	373	190	1,176	7	6,644

**Not to be taught*

Table IV — Comparison of Suggestions on When to Introduce Controversial Topics

Topics	Where Introduced	Parents	Elementary Teachers	Secondary Teachers	TOTAL
1. Sex	Grade One	Grade I	Grade I	Grade I	Grade I
2. Contraceptive	Fourth Year	First Year	First Year	First Year	First Year
3. Family Size	Grade V	First Year	Grade V	First Year	First Year
4. Death	Grade VI	First Year	Grade VI	First Year	First Year

about favorable changes as the taboos are deep-rooted.[12]

Influenced more by Sloan Wayland's stand that sex education in developing countries should not be integrated into population education, the Indian government's main interest now is to promote education in the demographic aspects of family life. This type of information can be related to family life and may lead to sex education. However, India realizes that before it can go into sex education, it must first do two things: (a) Conduct baseline research on the needs for sex education, taking into account differences in religion, levels of living, and the urban and rural ways of life; (b) Train, inform and give confidence to teachers who are either afraid or unprepared to give family life education.

DETERMINING CURRICULUM CONTENT AND METHODOLOGY

Data from studies on sex and curriculum content and comparative analysis of various sex education programs here and abroad provide ideas on the directions and trends in specific content being taught in a specific manner at specific grade levels.

At an abstract level, sex education programs in the Philippines (particularly by the PEP, Wesleyan College and the Philippine Women's University) and in the United States, Sweden, Denmark and Great Britain show basic similarities in curriculum content and organizational structure.

The content of the PEP and the American, Swedish and Danish sex education programs in the elementary level is usually divided into sex topics suitable for (a) the lower primary level, and (b) the upper elementary level. The lower primary level topics cover differences in the parts of the body of girls and boys, how babies are born, and family relationships. Kilander (1970) explains these topics are suitable for this age group because when a child enters school he has already acquired attitudes which affect his sex identity, like masculinity and femininity. Moreover, the child is just starting to develop secondary sexual characteristics. Because his genitals are beginning to grow, the child becomes curious about his own body and notices differences between boys' and girls' bodies, though he has little interest in the opposite sex at this time.[13]

Students in the upper elementary level, meanwhile, are considered to be in the pre-adolescent stage. Sex education at this point aims to prepare them for the physical, emotional and social changes they will experience in the adolescent stage. Sex topics for this level include the physical, emotional and social changes that occur in boys and girls during puberty and reproduction. Educators are warned that, at this level, sex information that is beyond the child's interest, readiness and experience should not be volunteered.[14]

In high school, the situation is different.

Since most students are now interested in the boy-girl relationship and in developing healthy sexual attitudes towards the opposite sex, a lot of active discussions are offered on such topics as love, courtship, marriage, dating, masturbation, necking and petting (Hernandez, 1975). And because secondary sexual characteristics are maturing at this stage, more sophisticated and scientific treatment is applied in the teaching of sexual development and human reproduction.

It is believed that it is in high school where topics like contraceptive methods and family planning should be taught.

Research evidence shows that it is in high school where the teaching of sex should come within a moral framework or emphasize character training. It is at this age level that most adolescents day-dream, are more unsocial, secretive and curious and tend to experiment and acquire vulgar notions about sex.[15]

This general structure for curriculum content in sex education covers the whole period of schooling from the elementary to the secondary level. As the grade progresses, so also does the range and depth of treatment of the subject matter increase, according to the stage of child development.

In the Philippines the PEP provides for sex education in all levels – primary, upper elementary and secondary. It is enriched in the syllabus by covering three content areas relating to sexual development, reproduction and sex behavior.[16] Sexual development deals with the sexual growth of a person in the context of his biological, psychological and sociological aspects and influence. Specifically, the sociological aspect goes into the various socio-cultural factors which influence sexual development and the child's sexual behavior in later life. It also deals with problems and issues which arise from a person's sexual conduct.

Reproduction, the second content area, deals with non-human and human reproduction. Human reproduction covers the reproductive anatomy (structure and function), reproductive process, hygiene of the reproductive organs, and disorder and diseases of the reproductive system.

The third content area discusses normal as well as abnormal sex behaviors and the problems arising from these varied behaviors.

The whole human sexuality program has been generally accepted by the conference participants although opinions differ on some aspects of the curriculum program on human sexuality.

The teachers found the existing units on human sexuality to be sufficient and acceptable both to them and to students. Most of the supervisors, on the other hand, felt the need to study the appropriateness of particular sex topics for students of different age or grade levels.* The social studies supervisors stressed that the readiness of students to receive specific sex information should always be taken into account. They also felt that a teacher should volunteer information only when asked by students, or when students show interest in a particular topic. In this regard, one policy planner disagreed, saying that Filipino students in the primary and elementary grades are by nature shy in raising these questions in the classroom.

Searching Questions

There was common agreement, though, on the need to refine and improve the curriculum program on human sexuality. Towards this end, the policy planners, researchers and supervisors proposed that an in-depth study be conducted to answer the following questions:

1. How much knowledge on human sexuality do students have at various grade levels?
2. What topics should be introduced at what levels?
3. What topics appeal most to students? What topics do they find boring? Why?

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*Author's note: This recommendation needs further definition in terms of specific objectives, areas of study, methodology and sample to be used.

4. What type of training must be given to teachers to make them more comfortable in teaching human sexuality?
5. Who should train the teacher?
6. When can teachers be said to be ready to teach, and students ready to learn human sexuality?

In this connection, the policy planner and researcher group further recommended that PEP explore the possibility of making use of the findings of studies conducted by the Child and the Youth Research Center. The studies covered sex practices and problems of Filipino adolescent students and sexuality in children aged five to 11. According to this group, the findings can serve as guide in drawing up the curriculum, particularly the appropriateness of certain topics for particular grade levels.

Recommendations for Curriculum Content

For their part, the teachers said the following suggestions should be considered for the curriculum content on human sexuality:

1. Topics on genitalia should be introduced in the Grade I health subject, especially in relation to cleanliness. Other topics, like changes in girls and boys during puberty, marriage and family life should also be integrated into health to reinforce the home economics curriculum on human sexuality;
2. The concept of differences in male and female sex behavior should be integrated into the unit of social organization in social studies. This will enable students to understand how behavioral differences between the sexes can contribute to the development or the destruction of social organizations;
3. Human sexuality should also be dealt with in biology, social studies, religion and character education; and
4. Contraceptive methods should be introduced in the elementary level in the rural areas because most of the students there drop out and marry early. However, in the urban areas, family planning methods should be introduced only in high school.

The supervisors' group, meanwhile, proposed the following:

1. The idea and the methods of preventing fertilization should be taken up in upper elementary science;
2. A deeper and more scientific treatment of the reproductive process should be given in high school.

On the same matter, policy planners and researchers further proposed that the physical aspect of changes at puberty in boys and girls be treated in health, and the social aspect be included in home economics. They also suggested that the biological aspect of maleness and femaleness be treated in health, and the social aspect of sex behavior in social studies.

"Must" Subjects

While some topics have drawn varied and divergent views, there are certain subjects that are felt almost without any discussion, to be a "must" in the sex education program.

Most studies show that students, parents, and teachers generally have a favorable attitude towards the teaching of such topics as boy-girl relationship, love, courtship, marriage, responsible parenthood and sex education (Brondial, 1973; Hernandez, 1975). The same studies indicate that high school students are interested in the same topics. Foremost among these are: (a) healthy sexual attitudes in the boy and girl relationship, love, courtship and marriage (Hernandez, 1975); (b) the human reproductive system; and (c) human reproduction and contraceptive methods (Brondial, 1973; Cadena 1973).

It is in the primary or lower elementary level where opinions differ widely on the sex topics that should be taught.

One study reports that pupils in the primary level did not show much interest in the boy-girl relationship, that is learning ways of expressing love to the opposite sex. However, they showed great interest in such topics as the family, roles and relationships of members of the family, individual differences, reproduction of babies and growing up, love and feeling with the members of the family. (Brondial, 1973).

Both teachers and parents expressed the same opinion on the topics that should be taught to children in the elementary level, according to the Brondial study. Another study reported, however, that parents disagreed with the opinion of teachers that children in the lower primary level should learn the parts of the body that have to do with sexuality, using the true vocabulary, and should relate to classmates how sisters, brothers or neighbors got married (Calaustro, 1973). The parents, Calaustro reported, felt that school children are too young to see, know and mention the sex organs and the reproductive process. This is supported by other findings (Quesada, 1974) that most parents feel sex education should be given in the upper elementary school level. "Words like penis, vagina and pregnancy were found to be too advanced for children to understand," Quesada reported.

In much the same way, majority of the teachers who were surveyed by the National Institute of Family Planning in New Delhi felt that topics such as human reproduction, physiology of conception, and contraceptive methods should not be taught in the primary levels.

In the high school level, the sex topics which are almost consistently found to be either difficult to teach or understand, least liked or embarrassing to discuss are: (a) menstrual cycle; (b) the genitals; (c) hormonal change; (d) masturbation; (e) contraceptive methods; (f) reproductive physiology; and (g) sexual intercourse (Hernandez, 1975; Quesada, 1974; Calaustro, 1973; Mendoza, 1972).

From their own classroom practices, the teachers recounted the varied experiences on the difficulty or facility of teaching these topics. According to the science and health teachers, discussing these units in the classroom gave them no problems nor caused any embarrassment at all. (Research findings state otherwise). In fact, the health teachers pointed out, these topics generate greater interest among students than the topics under demography.

On the other hand, the social studies mathematics and home economics teachers found these topics not only to be really embarrassing to discuss and difficult to teach and understand but also generally disliked. They attributed these reactions, however, to any or all of these factors: (a) teacher incompetence and lack of knowledge on human sexuality; (b) the immaturity and closed-mindedness of some teachers; (c) sex taboos; and (d) the cultural background of the students.

The supervisors reported that teachers appeared to be more confident and competent in teaching delicate subject matters like menstruation when there are separate sessions for boys and girls.*

The problem, however, is not confined merely to the acceptability of certain sex topics or the difficulty of discussing these topics in the classroom. The more basic area of concern lies in the problem of determining which sex topics ought to be introduced at which grade level. This problem is reflected in the inconsistencies found in the various sex education programs of the PEP, Philippine Women's University, Science Education Center, and Wesleyan College. Consider these: PEP teaches the human reproductive parts, including the genital organs in Grade 1, but Wesleyan College teaches it in Grade 4, and the Science Education Center and Philippine Women's University, in high school. The PEP, PWU and the SEC consider it inappropriate to teach contraception and contraceptive methods in the elementary level because research evidence reveals parents and teachers are strongly against the idea. Wesleyan, on the other hand, teaches contraceptive methods in Grade 6. Both the administrators and teachers in Wesleyan College feel it appropriate to include lessons on contraceptive methods for these pupils because they have already seen contraceptive devices being used by their parents at home.

Widening Controversy

The controversy over the grade level in which to introduce contraception has spread to all sectors of those directly involved in the population education program. The conference participants, themselves, have differing views on this.

For instance, teachers unanimously agreed that the topic of genitalia is appropriate for Grade 1, and that contraceptive methods should be taught to students in the upper elementary levels. The supervisors, however, had mixed feelings about teaching contraception in the elementary level. The science and mathematics supervisors did not go along with the teachers' reasoning that, because most school children drop out before finishing Grade 6 and marry early, they should be taught family planning methods in the elementary level. This is being done in the Philippine Wesleyan Colleges. Instead these supervisors recommended the adoption of the In-School Out-of-School (ISOS) approach which enables schools to reach elementary dropouts.

The reaction of policy planners and researchers to the issue was more ambivalent. They felt the elementary years may not be the ideal time to introduce detailed knowledge of contraceptives. But since most school children in the rural areas drop out before finishing Grade 6, there seems to be no choice but to introduce the subject, with appropriate treatment at each grade level.

They added, however, that curriculum writers and teachers must insure proper treatment of the topics, that is, these should serve as an "eye opener." Its primary goal should be to create an awareness among higher elementary pupils of (a) the various methods to control family size; and (b) the existence of family planning clinics where these methods available, should they find a need for them in the future.

A detailed discussion of contraceptive methods at this stage is deemed unnecessary, however. According to the policy planners and researchers, this would be inappropriate because the relevance of this information to the pupils, who may quickly forget it, is doubtful.

The teachers gave the following arguments, which the policy planners and researchers supported, for the teaching of the various methods of contraception in the upper elementary levels:

1. In the rural areas most school children drop out before finishing Grade 6 and marry early. Therefore, if the teaching of contraceptive methods is held off until high school, a large percentage of rural children will be deprived of needed knowledge in family planning;

2. Children in the upper elementary levels are already aware anyway of the existence of contraceptive methods from exposure to the mass media, and because their own parents use the methods. The responsibility of the school is to provide adequate and correct information.

The present population education curriculum of PEP does not include the teaching of contraceptive methods in the elementary level.*

The policy planners and researchers thus recommended that, to take care of Grade 6 dropouts, a simple booklet on contraceptive methods, anatomy and fertility control be printed and distributed to students. The students could refer to this booklet when the need arises.

A more thorough study of the treatment in high school of contraceptive methods is in order, however.

On the issue of introducing the topic of genitalia in Grade 1, common agreement was reached by the teachers, supervisors, policy planners and researchers. The following reasons advanced by the teachers, and concurred by the supervisors, the policy planners and the researchers, are:

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*Author's note: PEP program planners may have to re-examine the present curriculum to find out if there is really need to introduce contraceptive methods in the elementary level. However, research may have to be conducted first to determine the actual interest of teachers in the field and the need of students. If policy-makers find it more feasible and appropriate to use the ISOS approach, a decision has to be made on the type of linkages that are to be built between the PEP program and out-of-school classes. Should out-of-school classes be handled by PEP-trained teachers themselves? Or, should PEP integrate its program with other agencies already implementing out-of-school classes? How should the integration be effected so that population messages given to drop-outs complement the in-school curriculum?

1. Grade 1 pupils of both sexes are already aware that certain parts of the body differ in the two sexes. They also regard the school as the most logical and authoritative source of information on the sexual organs;
2. These same students are at an inquisitive age when they start to ask questions on human sexuality, which must be answered correctly;
3. Before these students attach any malice to sex, they must be given proper sex education by the school; and
4. These students must also be prevented from getting wrong information on sex from non-school sources like their peers and the mass media.

Inadequate Knowledge

These widely varying attitudes towards the teaching of certain concepts at particular grade levels indicate an inadequacy of knowledge on which age a child is already prepared for particular sex topics. Studies in the United States have shown that attitudes towards sex are fairly well-established among children by age five. There is no empirical evidence to show that this is the case in the Philippines.

Regardless of whether research results bear this out, Kilander (1970) insists that sex education should start as early as in pre-school, simply because it is in the midst of the process of growth towards sexual maturity that the school receives the child.

Margaret Mead (1940), in her book **Male and Female**, attaches mental health value in giving early information on sex. The reason lies, she says, not in any practical need but in avoiding emotional shock. This occurs if information is belated, arising from a discrepancy between the real and the imaginary picture built up when information is not given to satisfy great curiosity.

The Unesco Institute for Education (1964) considers adolescent age as too late to begin sex education because of the various social and emotional aspects to be considered.

The final question of what to teach at what grade level is difficult to answer. If it is given too soon, it may be meaningless or, worse, provoke anxiety. If given too late, the young may think it is slightly hypocritical. Obviously, for any given topic, it will be too early for some and too late for others. One must, therefore, rely on the modal experience of age groups.

However, for some school administrators, introducing controversial topics like human sexuality can be done more easily at the secondary level where there will be less objections. In addition, students at this level are more mature and better able to handle difficult topics.[17]

How to Teach Human Sexuality

An analysis of attitudes towards controversial and non-controversial statements about sex indicates a need for more emphasis on the moral or ethical aspects of teaching human sexuality. This is supported by a number of researches, which indicate the differences in attitudes and opinion between adults (parents and teachers) and the youth (students) in high school on sex topics like boy-girl relationships and marriage. These researches also reveal a changing value structure and changing patterns of behavior among the youth.

For instance, students agree that it is all right for a girl now to engage in kissing, embracing and even heavy petting to the point of intimately touching with her boyfriend; parents and teachers disagree. Other major areas of disagreement: parents and some teachers believe that "chastity and virginity are more important to girls than boys," that "a married woman's place is the home," and that "it is more acceptable for married men than women to have extra-marital relations." Students tend to disagree on these points (Brondial, 1973).

Several other studies indicate the extent of the changing attitude of the young towards some moral values on sex held by the older generation. One study (Cadena 1973) reveals that a significant percentage of boys agree that pre-marital sex is permissible; pre-marital sex is all right for boys but not for girls (Fonacier, 1971; Carcellar, 1970; Villaluz, 1971); and it's good for adolescents to have sexual intercourse because it will enable them to have a better sex life in the future.

These changes in attitude towards sex and sex education content have, in turn, brought about a change or a new trend in the perceived role of the school. In a Swedish survey, 55 per cent of those interviewed believed that the school should not condemn sexual relationships in adolescence. Instead it should encourage personal responsibilities and individual decision. The survey also differentiated the feelings of the adult (24-60 years of age) and the feelings of the young (18-23) on this issue.

Majority of the youth felt sex education should teach all attitudes and viewpoints on sex and morality, and leave the conclusions to students. The adults, on the other hand, believed that sex education may teach all sex attitudes but should definitely recommend abstinence or avoidance of pre-marital relationships.[18]

Findings in most other studies suggest that some moral tone or value should be applied in the high school level on such topics as boy-girl relationship, social behavior and how individual values influence sexual behavior.

Which Approach is Best

The crucial question is: how should the school teach sex education? A great divergence of opinions exists in this area. Hoyman (1970) suggests three approaches. The first moves around the old sex morality, which ignores biologic facts. It strongly advocates pre-marital purity and virginity and condemns masturbation as the route to insanity and hell. Many educators associate this type of approach with religious classes. For this reason, they feel that sex education should not be included in religion subjects.

The second approach is restricted to an exposition of facts. It aims to dispel ignorance and correct misconceptions about the biologic facts of life.

A strictly scientific-biologic approach to sex education has serious limitations, however. It may give the youth a distorted view of human sexuality and it may be used as an escape from a more realistic sex education. Studies have shown that the youths need a comprehensive sex education in school. This includes not just the biologic facts of life, but also the psychological, social and ethical dimensions of human sexuality and behavior.

The second approach is used in Denmark's sex education program. There, facts are given and moral problems connected with abortion, sexual permissiveness and illegitimate pregnancies – which arise in a simple proportion of the population – are de-emphasized.[19]

Louis Karmel (1970), in his article "Sex Information Yes, Sex Education No," supports the idea of keeping all sex matters in school on a strictly informational level. He says, "schools need to give sexual facts which are established as valid in the scientific community. If children in the public schools are exposed to sexual information which is mainly free of values, opinions and morals and is presented by competent teachers, they will be in a position to make their own moral judgment."[20]

In Sweden, there is a great change in the sexual behavior of the youth and increasing frankness in the description of intimate human relationships. As a result, the sex education curriculum has been criticized as being old-fashioned and moralizing.[21] Yet, teachers themselves who were surveyed believe that moral education should be taught by teams of teachers and should not be the responsibility of just one individual.

The third approach teaches the new sexual morality, which advocates radical stand akin to the playboy approach to sex. Here, sex becomes a game, with the female to be used, enjoyed and then cast aside. All versions are based upon sexual permissiveness and situation ethics.

This approach does not skirt delicate subject areas like pre-marital relationship. Instead, it holds that schools should take the position that indulgence in pre-marital intercourse should be left to mature judgment; it also insists that teaching should not be indoctrinal. Its advocates believe the sex education has become difficult nowadays because much of the existing moral code is based upon religious thinking which teenagers do not accept.

There is plenty of evidence from researchers though that teenagers are anxious to be informed about sex and want sex education, provided, however, that it is given with assurances backed by knowledge and proper understanding of their particular problems.

A Cop-Out

For the school to bring in sex education without assuming any ethical or moral responsibility is tantamount to what the youth today would call a "cop-out".[22] There are times, however, when teachers suddenly feel they have nothing important to say, or that their beliefs are old-fashioned. One explanation for this is the rapid change now taking place. As a result, the individual finds it quite difficult to establish a code of behavior. Packard (1963) perceives the problem not so much as that the youth are rejecting adult standards, but rather that they have few, if any, clear standards from which to rebel.

Grams (1969) emphasizes the importance of attitudinal development in human sexuality. He says teaching children about sex involves much more than giving them the facts of life. The very nature of human sexuality guarantees deep emotional involvement and precludes its being dealt with in an impersonal and objective way.

Kilander (1970) also is of the opinion that human sexuality is not merely a unit of reproduction, or that it consists merely of teaching how babies are conceived and born. Instead it has a far-reaching scope and goal – to help a youngster incorporate sex more meaningfully into his present and future life.

Armed with some basic understanding of virtually every aspect of sex, he will, by the time he reaches full maturity, be able to recognize the existence of differential sex patterns. This way he can interact harmoniously with people whose sex norms differ from his own, and cope with controversy.

Sex education in Pakistan hews to the view of many parents for a moderate approach to sex so children will not be burdened with information they could not relate to experience. The belief there is that if the moral framework is neglected, it could be unwise to give complete sex knowledge.[23]

Factual and Ethical Approaches

Some programs use both the "factual" and "ethical" approaches for sex instruction in school. Britain's program, for instance, provides two approaches in sex education. The first deals with topics on a "factual basis," and are integrated into science and biology classes. In the second approach, content or factual information is not emphasized. Instead, it attends to the attitudes or orientation of the young towards a certain range of problems. Difficult moral issues are dealt with by a mixture of source materials provided by the program and through group discussions. The teacher's role is that of a neutral chairman who elicits views from, but does not prescribe solutions to the pupils. This approach is integrated into the humanities curriculum to help pupils understand the controversial areas of human concern. A new approach is being developed to handle controversial issues through discussion where pupils will not be influenced by the teacher's own views but will, to a large extent, take responsibility for their own learning. Materials to be used as evidence during the discussion will include printed extracts of fictional and nonfictional prose, photographs, cartoons, ads and tapes.

In the Philippines, the question on the right method for teaching human sexuality has given rise to diverse views and recommendations from the educational sector. Among the conference participants, particularly, this issue has elicited conflicting opinions, leaving the problem unresolved. Some of the participants held the view that treatment of the subject matter should be limited to mere factual information; others stressed the need for putting it on moral and philosophical levels; still others proposed a combination of these approaches.

Specifically, some of the teachers felt that sex education should be both factual and ethical. They proposed that students be given all the facts and the prevailing attitudes and values on sex and morality, and furthermore be told which to follow. They said this approach is consistent with a policy of the Department of Education and Culture, which states that good moral values should be renewed, strengthened or inculcated among Filipinos through education. Moreover, they said, a purely factual approach would leave out the moral and emotional aspects, which cannot be dissociated from a human experience – sexuality.

On the other hand, some researchers and supervisors said only facts should be given and allow students to make their own decisions. They explained that a purely ethical approach would leave little of the decision-making to the students, thus thwarting the basic goal of population education which is to inculcate in these students the ability to make responsible decisions. In addition, this approach would be appropriate because in the fast-changing moral code of today's youth the purely ethical treatment would make it difficult to reach students who are bolder and more philosophical in their outlook.

Policy planners, researchers and the rest of the teachers and supervisors were for combining the two approaches. According to them, topics that lend themselves to the strictly informational approach should be treated factually; those that call for a discussion of ethical considerations should be treated on the moral level. They believe that there is a still need to treat human sexuality in the context of Philippine society, its culture, mores and ethics.

The questions of what is morally right and who is in a position to render moral judgment were also left unresolved. However, both teachers and supervisors recommended that policy planners, the PEP and trainors provide training and reference materials on value clarification to help teachers deal with questions of morality and discussions of values.*

Recommendations

Policy planners and researchers attempted to resolve the issue by drawing up a policy statement that the teaching of human sexuality is more a matter of attitudes than of facts, and should therefore be treated within the context of morality. The issue of what is morally right or wrong could be handled by a working group which will draw up a basic position paper to serve as a guide to the ethical and moral considerations in the teaching of sexuality. They said the PEP and this working group could draw on the resources of the following agencies which have this extensive data on moral values and family norms:

1. United Church of Christ in the Philippines;
2. Christian Family Movement;
3. Catholic Marriage Advisory Council;
4. Family Planning Organization of the Philippines;
5. Philippine Women's University;
6. Other local and foreign agencies which have conducted studies on family life and marriage; and

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*Author's note: Policy makers and researchers might want to first examine the stand of the national population program on the various moral or ethical questions raised in population. Researchers might also want to determine the moral and socio-cultural values that are negatively affected by the introduction of population education. Results of this study could serve as basis for the content of the training, and as a reference material on value clarification.

7. The Bible, the Qur'an, and other religious reference materials.

One policy planner also suggested: in the spirit of human freedom, emphasis in the teaching of human sexuality should be more on value clarification than on a list of do's and don'ts, or on statements of what is morally right or wrong from the perspective of the various religions.

This wide range of opinions reflects the importance of the proper dissemination of such a controversial topic as human sexuality. What is perhaps just as significant is the need to formulate proper objectives and orientation.

It is conceivable that without the right objectives and orientation, a sex education program could do more harm than good to students. Kilander (1970) lists five primary objectives with supporting statements, which reflect an over-all integrative function to teaching sex:

1. It is necessary to give students sound, factual information needed for their development into healthy well-adjusted adolescents. Information provided should cover the topics of masturbation, intercourse, ejaculation and menstruation. The students should be given knowledge of biological and developmental terms and an awareness of the normal maturation process;
2. It is necessary to explore emotional problems confronting the adolescent. Most sexual behavior is determined by his/her reactions to pressure from parents, teachers and the community. Thus his/her concern is the *acceptable* manner in which he/she may function socially and sexually. Awareness of parental opinion on sexual behavior is perhaps the most important determinant of proper emotional development of the adolescent;
3. It is necessary to explore physical problems which adolescents must face;
4. It is necessary to help students develop a sense of personal moral responsibility, based on the standard of the community; and
5. It is necessary to help students develop psychological and physical readiness simultaneously, for moral and sexual action.

Through this approach, sex education can hope to effect these changes in attitude towards sex: (a) Sex would be regarded as an attribute of personality, rather than just being physical; (b) Irrational moralism and non-moral attitudes would be replaced by insightful attitudes; (c) A hush-hush or a garrulous attitude would be supplanted by objectivity; (d) Grim, dour or frivolous acceptance would give way to poised acceptance; and (e) Fear and dread or shocking bluntness would be replaced by openness.[24]

PROBLEMS
OF
TERMINOLOGY

Another problem which hampers the effective implementation of sex education in school is the use of "offensive" or technical sex terms.

Indeed, studies have shown that there really is need to develop a sex education vocabulary which will be understood and accepted by students.

The problem has been encountered by the Population Information Education Office of the National Media Production Center (PIEO/NMPC) in its production of population materials like brochures, flip charts and films. This is particularly true when the content calls for the naming of the sexual organs as they relate to conception and contraception.[25]

Three questions then crop up. Should we call sexual organs by their scientific names (in which case we are not understood)? Or should we call them by their popular names and run the risk of being accused of being vulgar and creating a negative attitude? Or, should we, instead call these parts in a descriptive manner or use euphemisms, like calling a penis an eggplant, an umbilical cord a body stalk, a diaphragm a cooking jar, and a fallopian tube an oviduct.[26] As to the third question, a major problem arises. It is felt that euphemisms will, in the long run, only tend to mislead and miseducate the students, and consequently provide the school more difficulty as it will have to work on the "unlearning" of the student.

To solve the problem, PIEO-NMPC called a series of conferences attended by family planning motivators, nurses, extension workers and trainors from different parts of the country. The purpose was to get their reactions on a list of controversial family planning and sex terms in English. More specifically, the participants were asked how the terminology should be translated into dialects; whether the terms are acceptable to and understood in their localities; and how various audiences will react to the use of the terms. Out of the conference was evolved a vocabulary of sex and family planning terms in the different dialects which participants thought were the most understood and acceptable. The participants emphasized that the terms they suggested will still have to be evaluated or post-tested on actual audiences. Teachers, supervisors, policy planners and researchers again showed varying reactions on ways to meet this problem of terminology.

Most of the teachers felt that in the teaching of human sexuality, not just one set of terms but a combination of terms should be used.

Health and the home economics teachers were heavily inclined towards the use of scientific terms. They suggested pairing them off with the corresponding terms in the vernacular to facilitate explanation and acceptance. Similarly, the supervisors recommended that the true or scientific names of parts or functions be paired off with the corresponding names used in a given locality.

This point was supported by the policy planners and researchers. They concurred with the opinion that a combination of scientific, popular and euphemistic terms be used. According to them, usage will depend on need and so, symbols and terms must be used in their proper context. Also, this group noted that local terms which carry negative connotations may be more acceptable, if they are paired off with their corresponding scientific terms.

The social studies, health and home economics supervisors, however, tended to be more cautious. They suggested that the terms used should first be acceptable to both students and parents. And to determine acceptability, they recommended that research be done to determine the following questions:

1. What sex terms are commonly used by the different ethno-linguistic groups in the country? What are the equivalents of English sex terms in the local dialects?
2. Which sex terms are acceptable to and widely understood by students?
3. Which approach is most effective in dealing with the problem of terminology: calling parts and functions by their everyday names? using euphemisms? using scientific terms? *

The policy planners and researchers pointed out that the studies need not be sophisticated and expensive. They said the teachers could be trained and should be encouraged to undertake their own surveys on terms and approaches which are acceptable in their own areas. They further recommended that sex terminology could be legitimized by its exposure through the mass media, like for instance, discussions in "Pulong-Pulong sa Kaunlaran" and inclusion in movie dialogues.

In the larger context of the national population education program, however, it seems that the solution to the language problem cannot be left mainly to school efforts and resources alone. This has to be solved jointly by both school and non-school agencies involved in family planning and population. Both entities should decide on a standard terminology to avoid confusion and negative reactions among the different program audiences.

If the schools decide that the use of the correct terminology, that is, calling a spade a spade, in the classroom is the best method, then other agencies involved in the sex education program would have to follow suit. In fact, most non-school agencies say: "If we want to have a more lasting and permanent effect, the school should be the one to start the educating."

For the school, this is easier said than done. PEP can instruct the teachers to describe the sex organs or the process of conception and birth as casually as they do about the arms, legs, or the face. However, more harm than

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*Author's note: A problem arises as to how the use of local terms will affect a directive of the Dept. of Education and Culture on the use of both English and Philipino as the media of instruction in all parts of the country and in all levels of education. Will the use of local terms conflict with the Dept.'s attempt to standardize the various dialects in the country into two main languages? How will it influence the writing of the curriculum and information-education-communication materials in population education? Will the use of local terms not affect the acceptance and learning of the English and Philipino terms? Or will a pairing of local terms with the English and Philipino terms facilitate acceptance of the English or Philipino terms?

good will result if, in the course of instruction, teachers are uncomfortable and embarrassed.

To solve the problem of devising correct and accurate terminology for students, Kilander (1970) offers these suggestions:

1. Introduce synonyms gradually, using both the old and the new terms during the transition period. The popular term can be paired with the proper term, as urinate or "wee-wee," "flower or vagina," and "bird or penis;"
2. Make an inventory of all terms which are considered controversial, technical or "obscene," and discuss their use and the reasons for using them with students and parents.[27] This will encourage the involvement of the parents and may even help in evolving a terminology acceptable to both the parents and school, and which may even spare the child from confusion and fear;
3. Some parents and teachers are most comfortable in the language that corresponds to the child's age. Parents and teachers may want to use nursery terms when their children are in nursery school or kindergarten, and more scientific terms later on. Teachers can help determine this by compiling a checklist of sex terms which they will test in the classroom for understandability, suitability and manner of use (i.e. its simplest meaning or its scientific meaning). The final list according to grade level should be printed and sent to parents for their own use at home. Parents themselves should learn to use the terms without feeling self-conscious.

Populat
VAGINA
RECTUM

TEACHER COMPETENCE: A CRUCIAL FACTOR

Studies emphasize the crucial and influential role of teachers as providers of sex education in schools. At the same time, however, these studies question the ability of teachers to fulfill this role.

One primary reason why so many parents and youth are apprehensive about the school playing a major part in sex education is that they lack confidence in the teachers' competence to teach human sexuality. It is for this same reason that some countries, particularly India, Tunisia and the United Arab Republic, are hesitant to introduce sex education into their school curricula.[28]

Cultural values, like sex taboos and superstitious beliefs associated with sex, which are characteristic of the Philippines, impose a big constraint on the teaching and acceptability of sex education by both students and parents. For instance, instruction on human reproduction is a very sensitive area. Students often find it difficult to understand and learn the parts and physiology of the reproductive system and the genitalia. They associate them with shame and guilt because these topics, considered taboo by society have already been internalized by them.

Dr. Manuel Escudero illustrates this in this experience in teaching about the human body to nurses and doctors.[29] He found it difficult for the doctors and nurses to conceptualize the classical division or presentation of the anatomical picture of man and woman or the birth process. He ascribed this phenomenon to the psychological attitude that there is something very peculiar in the conception of one's self. So much so that, if he said there is the fallopian tube, the ovaries, the uterus, vaginal canal and the genitalia, there is something distant about it. This attitude is a carry-over of many unconscious conflicts, misconceptions or myths in relation to the nakedness of the human body. And because of this carry-over – and the influence of parents or adults on the youth – the teacher finds it difficult to make youngsters conceptualize the human body. In short, students cannot consciously accept what have always been associated with shame and guilt.

The teacher, on the other hand, feels that if any sexual part is mentioned in Pilipino it sounds vulgar and crude. So the teacher prefers to call it "kwan" and then identifies it in terms of motion or action. But then, this worsens matters. Also, teachers and school administrators find it against the old social and cultural content that anything related to intimacy is vulgar, bad and shameful.[30]

Teachers themselves, in a survey done by Ann Lucas (1969), felt they were not ready to handle some issues. As one of them commented: "This is a subject which is very different from anything else we talk about. It is taboo, unacceptable and makes me feel uncomfortable."

A Wesleyan College study noted that unmarried woman teachers were embarrassed teaching the human reproductive system.[31] They confessed they found it difficult and embarrassing to discuss this matter with children.

Mendoza (1972) also found that elementary school teachers were highly misinformed about topics like menstruation, reproductive physiology, contraceptives and "developing healthy sexual attitudes."

Even in Sweden, a 1968 study revealed that only a minority of Grade 9 teachers considered themselves sufficiently trained for sex education. Another study showed that some teachers shied away from questions, preferring to deal with children on such matters as menstruation.

In the Philippines, it is very surprising to discover that most of the teachers who attended the conferences claimed they never faced the problem of particular sex topics being rejected by students as taboo. But if the problem arises, they said, it should not be reason for the elimination of the topics from the curriculum. A home economics teacher said that, in fact, teachers should consider it a challenge to make taboo-laden sex topics acceptable to students.

Some teachers in health and mathematics, who admitted meeting this problem, said they had difficulty discussing the topics of premarital sex, "free love," orgies, masturbation and the genitalia.

The social studies supervisors took the attitude that human sexuality should be taught within bounds of the accepted moral and cultural values of the community; where certain sex topics are considered taboo, the teacher should desist from discussing them in class.

Solution to Teacher Incompetence

The conventional answer to the question of teacher competence and preparation is the provision of pre-service and in-service training. Too often, however, these types of training can only provide development of teacher competence in terms of increased knowledge. They rarely help in cases where change is called for in deeply-rooted attitudes and values.

Realizing this limitation of teacher training, Great Britain developed an innovative training scheme.[32] It covers a much broader concept than sex education training. And it includes moral education and all concepts of personal relationships.

In-service education is given in three stages in secondary schools. The most crucial among these stages is the third, during which the physical and moral aspects of growth to maturity are discussed. Teachers giving this information, must have certain personal qualities, so a strict selection procedure is adopted. Teacher-candidates attend a 24-hour selection conference which includes group discussions, open meetings and private interviews with a psychiatrist and a head teacher. At the end of the conference, candidates may either be asked to return for further selection conference, or are discouraged from undertaking this work. Those selected attend a three-day live-in course, covering instruction in child development, communication techniques and teacher-pupil relationships.[33]

This method uses the training-selection and training approach, with the psychiatrist participating in the selection. Schools which cannot afford to apply this expensive, tedious and lengthy method can resort to conducting an initial screening of teachers either by the principal or head teacher. The screening can be done through a knowledge, attitude and behavior test, and interviews with school counselors.

Importance of KAP

A KAP (knowledge, attitude and practice) test is important because sex education involves primarily the communication of attitudes. And attitudes are contagious. Teachers continually transmit attitudes towards sex in variety of ways: a sharp intake of breath, a raised eyebrow, omission of subject matter or manifest discomfort when certain topics are brought up.

Authoritarianism in this area of education can be damaging. And the temptation to be authoritarian is great, particularly for persons whose attitudes towards their own sexuality is inadequate.

Hinton (1969) says that a teacher, to be truly effective when handling sex education, must have sensitivity and balance. He must be well-informed, warm, understanding of teenagers, and be able to talk with innate modesty. Children must not feel that there is tension in him. Instead, he must show awareness of what it is to be human, must be discreet and must be sensitive to the differences in attitude within the classroom.

Desired Qualities

Filipino parents believe that only teachers with the following qualities should be allowed to teach sex education: (a) Adequate knowledge of the subject; (b) A mature, healthy and respectful attitude towards human sexuality; (c) Ability to communicate honestly, clearly and sensitively; (d) Be happily married; (e) A high degree of warmth and affection for children; and (f) A non-authoritarian technique of teaching (Quesada, 1973). Students themselves feel married teachers best qualify to give sex education.

The teachers themselves acknowledged their need to have certain qualities to be really competent in communicating knowledge and attitudes on human sexuality. They agreed that teacher competence is the most crucial factor for the effective teaching of sex education. The teachers noted the following criteria, listed in the order of importance:

1. Open-mindedness;
2. Emotional maturity;
3. Good moral character;
4. Knowlegeability in content and methodology;
5. Acceptance of the Population Education Program's objectives; and
6. Intensive training in population education.

All of the teachers rejected the research finding that their married colleagues are more competent to teach human sexuality.

The supervisors said training alone will not ensure teachers' competence, much less change their attitudes and deeply-held values on sex and morality. They believed that for the effective teaching of human sexuality, proper attitude and right psychological responses are more important than knowledge on the subject.

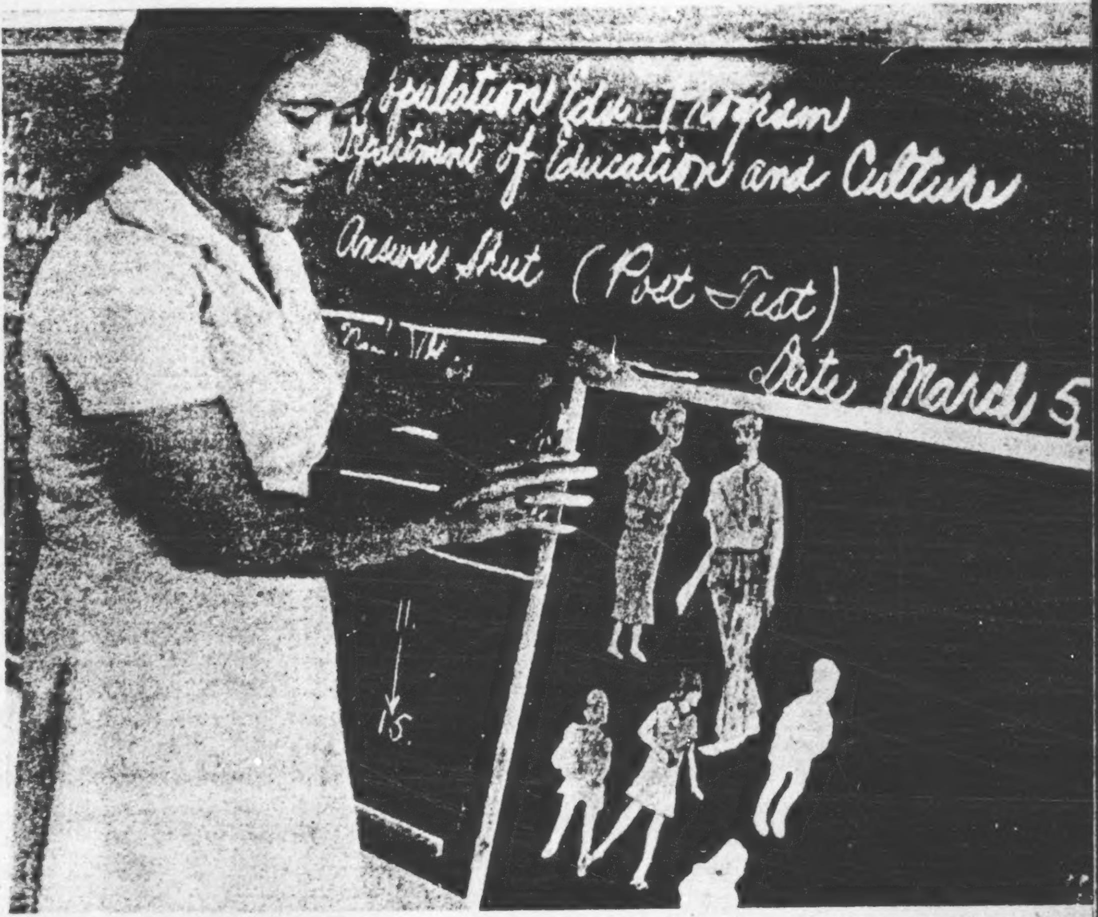
Policy planners and researchers, however, were divided on the issue of teacher competence. Some of them felt it was demanding too much, that it was too difficult and too impractical to go around looking for this "ideal" teacher who possesses most, if not all, of the six qualifications listed by the teachers. In the first place, according to them, it is difficult to construct and tedious to administer an instrument or a measure to evaluate or determine whether a teacher has the needed qualifications. A policy planner suggested instead that, to counter teacher competence, a curriculum and training program on human sexuality for parents be drawn up first. This way, the school's program on human sexuality will just be supportive to the parent's role.

Some policy planners, on the other hand, argued that some ideal standards for teacher competence should be set up – standards which the program could aim to reach. These policy planners agreed with the six criteria enumerated by the teachers, but disagreed with the teachers' view that a married one is not necessarily more competent to teach human sexuality. They proposed that the following criteria for teacher selection be added to what the teachers had recommended:

1. Respect and reverence for sex and the institution of marriage;
2. Happily married, and if single, must have had a pleasant and morally upright family life; and
3. Ability to communicate sincerely and honestly and must love children.

Recommendations to Solve Problem of Teacher Competence

No definite agreement could be reached on the most effective method to develop and improve teacher competence in the teaching of human sexuality. Some teachers and supervisors recommended the use of a combination of approaches: in-service training, team teaching, and teacher selection. They said teacher selection or screening can be done by the principal, guidance counselors, head teachers or family planning authorities.



To some other supervisors and teachers, however, teacher training alone will not ensure competence, much less change attitudes towards deeply held values on sex and morality.

Some teachers believed teacher selection or screening before training is the most effective method of ensuring competence. Some supervisors, however, expressed misgivings about the method. Ideally, according to them, the method is the most preferable, but it is not feasible for these reasons:

1. There are not enough trained teachers to choose from;
2. The present elementary school system is not ideal for teacher selection because one teacher handles all the subjects in one grade level; and
3. The PEP's target is to train as many public school teachers as possible so population education can be integrated by these teachers into other subjects soonest. In the process, little consideration is given to the teachers' psychological preparedness for teaching human sexuality.

Some supervisors added that there are trainors who, despite having completed a six-week training on population education, are incompetent to handle the subject of human sexuality and human reproduction.

Some supervisors recommended the use of in-service training and team teaching to offset whatever personal bias the teacher may have towards human sexuality.* To neutralize teacher incompetence, other approaches in teaching human sexuality were recommended:

1. Team teaching;
2. Peer teaching. (Effective only if the peer is accepted as an authoritative person);
3. Informal methods of teaching outside the classroom. The atmosphere outside the classroom encourages openness in the discussion of sex; and
4. Re-orientation and training of teachers on human sexuality. This includes a number of "desensitization" activities and lectures to bring about proper attitude such as openness towards sex, and minimize if not eliminate embarrassment among teachers.

Other Strategies

There are schools which cannot apply stricter teacher selection procedures or decide independently on who could teach and what should be taught. The following strategies have been recommended for these schools to neutralize or minimize the negative influence of ill-prepared teachers in the classroom:

1. Use the questionnaire approach in cases where the teacher finds it difficult to relate effectively with the pupils. Under this approach, the teacher, after giving factual information on sex topics, asks the students to write down their questions. The questions are answered only the following day to enable the teacher to consult other people for the correct answers. This way, the teacher is not placed in a spot if he or she is asked a question he or she could not immediately answer;
2. Use team teaching. Under this approach, several teachers or authorities like doctors, nurses, social workers, parents or priests are asked to discuss or lecture on a particular topic. Some studies have shown that students prefer this format of sex education.[34] The format is usually used in discussion of the moral aspects of sex education;
3. Use group discussions, buzz sessions or role playing. Under this approach, students themselves discuss and discover their own and others' attitudes towards human sexuality.

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*Author's note: It would be interesting to find out to what extent a complete and broad knowledge of human sexuality will help neutralize the personal bias of a teacher towards sex and morality. Also, it might help if researchers determine accurate measures of teacher competence in the teaching of human sexuality.

INVOLVEMENT OF PARENTS

Studies indicate the need for parents to be close partners with the schools in providing sex education to their children. In fact, most educators believe responsibility for sex and family life education rests with the parents themselves.

Yet there is evidence that the family environment often does not provide young people with an accurate and adequate understanding of human sexuality. Studies have shown, for example, that the education of most Filipino youth on the physiological aspects of sex does not take place at home.

Other studies, on the other hand, have shown that some students prefer to consult their parents on questions of love, courtship, and marriage. They also feel that sex information should be given by parents, according to these same studies.

For their part, parents have mixed feelings on who should provide sex information to their children. Many believe the school is in a better position than they, provided, however, that sex information is handled by competent teachers. Otherwise they feel their children should consult them first on problems and questions regarding sex.

A review of the literature shows that there are a number of topics on sex education, which evoke different reactions from parents, from students, and from teachers. The tendency of parents and teachers to disagree in some of the topics will likely confuse, if not turn off, students. This becomes more so particularly if what the teachers teach in school are counteracted by parents in the home. For instance, actual names are used in the teaching of sexual organs in Grade 1 – a practice which is considered taboo in many homes.

From their own teaching experience and practice, however, most of the teacher participants in the conferences have expressed satisfaction with the parents' positive reaction towards the role of schools in disseminating sex education. They claimed they have not encountered opposition from parents on the teaching of human sexuality in school. On a PEP survey finding that 3 per cent of parents disapprove of the inclusion of human sexuality in population education, the teachers offered the following explanations:

1. Parents who oppose the teaching of human sexuality to their children are those who have not attended any family planning lectures;
2. The opposition could be due to parents' beliefs, values, taboos and demographic characteristics; and
3. Parents are afraid their children will be misdirected on sex by incompetent teachers.

Resolution of Conflict

Some countries, where this conflict between teachers and parents exists, have resolved the problem by acknowledging that both the schools and the parents have roles to play in providing sex education to children. In fact, schools and parents could complement each other as they play their respective roles. Parents should be told what the schools are doing for their children, if the schools want their programs to be implemented more speedily.

Schools may impart general instruction to students, but learning is reinforced in terms of behavior when parents support the values taught in school. For this reason, it has been suggested that schools take the responsibility for teaching factual content, and parents the responsibility for character or attitude formation. After all, it should be remembered that the lifetime learning experiences of the child are predominantly affected and influenced by the family; the school's influence usually stops at some point.

Innovative Projects

In Great Britain, two innovative projects have been implemented to involve parents in school activities.[35] The first calls on the schools to launch "public relations" efforts to ensure that parents know what is being done in the schools, how and why.

The schools usually convene two meetings. The first is for parents only, to present to them information on the courses taught and to provide them with an opportunity to discuss the problems their children must face as they mature. The second meeting is held for both parents and children to provide them with an opportunity to discuss what is being taught in school and to set the atmosphere for further family discussions.

Films are shown during the meeting to help parents overcome difficulties with terminology and lack of knowledge. Also, tape recordings of typical family scenes are played to demonstrate how sex information can be given to children in an easy and natural way. Parents are then informed about the types of questions children usually ask during classes, and the answers given by the teachers. This is to prepare parents to handle the same questions if these were to be asked them by their children.

The method has helped build parental confidence in the teacher, according to an evaluation of the project. At the same time, most parents found these sessions have helped them raise sex subjects more freely with their children.

Alternative Approach

The second project is an alternative approach to informing parents of the school activities. Printed materials, containing questions usually asked by children, and guidelines on how to answer them are given to parents who don't have to attend the special meetings.

A similar project has been implemented and found effective in India.[36] The Family Planning Training and Research Center undertook a sex education program primarily by making use of three film showings on human reproduction, human growth and menstruation. Before the films were shown to students, the school invited parents for a preview and elicited later their comments on content. Based on the parents' suggestions, a sex education program was developed for students (Bhatawadekas and Israel).

In the United Arab Republic, the need for sex education is felt more for parents than for children. Any idea of introducing sex education as a formal curriculum is unacceptable because of lack of qualified teachers, uncertainty as to what should be taught, and who should teach it. Thus, what has been launched is a project to give sex education to parents.[37]

The same approach has been adopted in Colombia. There, research has shown that 99.3 per cent of parents want sex education for themselves. The need is ascribed to the poor quality of family relationships, particularly sexual inter-personal relationships between husbands and wives. Parents are given instruction through women's clubs and the Parent-Teachers Association.

The following implications could be derived from the findings of these studies:

1. There is need to bring about a better understanding among teachers and parents of the students' need for sex education, and how this need is being met;
2. There is need to bring about a better understanding among teachers and parents on what each could expect from the other on the education of the children; and
3. There is need to determine how parents influence or affect their children's acquisition or development of concepts of human sexuality.

Recommend Parents' Involvement

Acknowledging the important role that parents have in the overall population education program, teachers, supervisors, policy planners and researchers have made several proposals that they consider relevant to the Philippine situation. They took as examples the projects of other countries to involve parents in the education of their children on human sexuality. And all the participant groups agreed that the following activities should be implemented:

1. Dialogues, school/meetings, population education seminar-workshops, home visits and sessions on curriculum revision should be organized to get parents involved in the program;
2. For parents who cannot attend meetings, a strategy to communicate to them issues or problems being met by teachers in the teaching of human sexuality can be implemented by distributing to them printed materials on the school's population education program;
3. Adult education classes or a crash course on population and human sexuality should be offered to parents to open their minds and establish a more favorable climate for the teaching of these topics to their children;
4. Selected parents, doctors and other resource persons in the community should be utilized. Also, the possibility of exchanging resource persons and materials among neighboring communities to improve acceptance and effect economy should be looked into;
5. Peer teaching should be encouraged to supplement teachers' efforts in population education; and
6. There should be coordination between barrio organizations to teach parents, out-of-school youths and other members of the community and to inform them on what is being taught in school and how they could complement the school's efforts. These agencies and organizations include Rural Health Units, Samahang Nayon, barangays, the Department of Local Government and Community Development, Rural Improvement Club, Mothers' Club, Family Planning centers and Youth Clubs.

The supervisors generally agreed that PTA meetings are among the most useful and effective vehicles for informing and getting parents to participate more actively in school activities. Some of them, however, cautioned against too much dependence on the method. They pointed out that this holds true especially in urban areas, where parents could not be persuaded to attend PTA meetings unless supervisors use force or incentives. A policy planner noted that in some areas, PTAs have served a negative reputation among parents because PTA meetings are held only to solicit contributions. Hence, poor attendance. These supervisors suggested that other methods be tried to involve parents in sex education.

AFTER VASECTOMY

MASS MEDIA AND AUDIOVISUAL AIDS

In their studies, Fonacier (1971) and Cadena (1973) found that teachers considered as either unsuitable or inadequate the audio-visual materials they use in their sex education classes. High school teachers proposed the use of pamphlets, magazines, models, films, slides and filmstrips which they believe can arouse more active participation from their students. Biology teachers who found it difficult to handle subjects like contraceptive methods and the menstrual cycle believe that contraceptive illustrations and films on the menstruation cycle will greatly help enrich classroom discussions. Furthermore, selected teaching devices are often needed to pave the way for uninhibited discussions on more controversial areas.

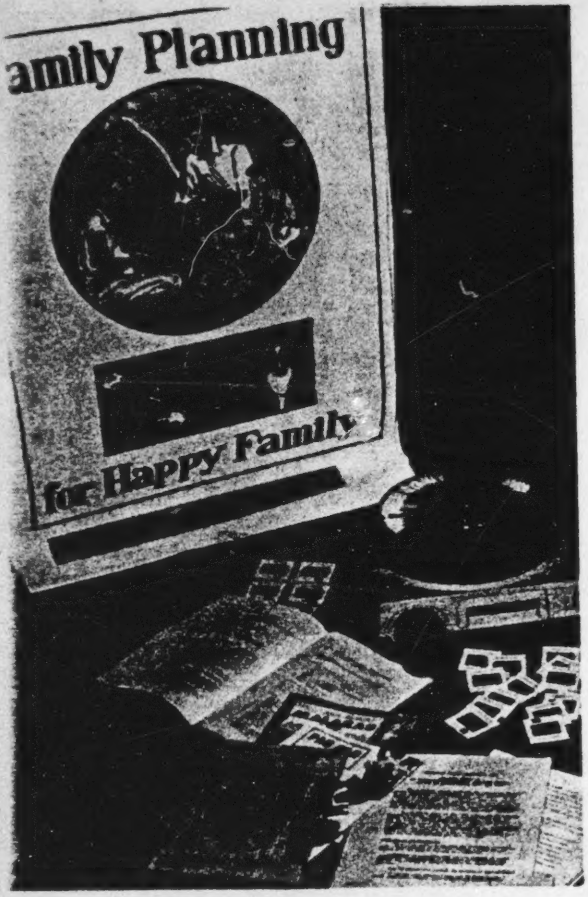
These findings have been found pertinent by the teacher participants. They agreed that teaching arts and audio-visual materials help facilitate explanation of controversial topics which are often difficult and embarrassing to present verbally. Audio-visual materials reduce the vulgarity of language and disensitize students through exposure to illustrated materials.

The supervisors concurred with the teachers on the helpfulness of teaching aids. Some of them noted, however, that certain materials, particularly flip charts and posters, contain pictures which they consider vulgar or obscene and inappropriate for children. They also noted that the accuracy of content and technical detail of these materials still need to be pre-tested and evaluated further. These inaccuracies in teaching aids merely compound teacher incompetence, they said. Some supervisors, at the same time, observed that some teachers do not even know how to use teaching aids; moreover, what these teachers say in class are often inconsistent with what the visual materials show or contain.

An Urgent Need

Strongly aware that resource materials on human sexuality are extremely inadequate to meet the needs of teachers, policy planners and researchers have expressed the urgent need to solve the problem. Their recommendations:

1. Teachers should be trained in the correct use of teaching aids. To insure that facts and illustrations are presented and described correctly, there should be textual materials at the back of flip charts, posters and other visual materials. These will guide teachers during lectures;
2. The preparation and correct use of teaching aids should be one of the topics in the re-training program for population education teachers. A manual on media production should also be distributed to teachers to guide them in the preparation of their own teaching aids;
3. A corps of teachers trained in media production should be organized to take care of supplying the needs of their fellow teachers for simple teaching aids by reproducing these materials at the local level. This way teachers will not have to wait for materials from the central office;
4. Basic teaching kits should be sent out to the field for replication and improvisation. These should at least be furnished by the central office, and modifiable to the region where they will be used;
5. Links should be established between the National Media Production Center and the information-education-communication divisions of the Commission on Population's regional offices for media production at the regional level;
6. Teachers should be trained to pre-test and evaluate their teaching aids;
7. The role of mass media in population education and the areas of coordination between the program implementors and



mass media must be clearly defined to effect consolidation of efforts;

8. A management study should be conducted on the Department of Education and Culture's system of distributing audio-visual materials; and
9. Another management study should be undertaken on the research utilization and information dissemination practices of research agencies.

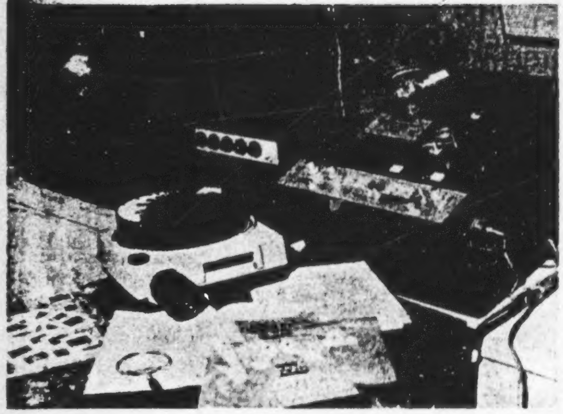
The problem of the inadequacy or unsuitability of supportive materials for population education have been tackled by international population organizations themselves. Towards this end, the Population Council has, for instance, supported publications and special reports for teachers.[38] The Population Reference Bureau is also actually involved in developing educational materials, like textbooks and audio-visual aids. These aids are learner-centered and are considered as an important alternative to the traditional textbook and other instructional activities available to classroom teachers.[39] The Center for Population and Environmental Education, University of North Carolina is also designing audio-visual materials for individuals or groups that do not require the presence of a teacher.

BBC Series

In Britain, the British Broadcasting Corporation is running a series of radio and television programs for schools which are supplemented by teachers' guides and well illustrated booklets for pupils.[40] These programs consist of:

1. "Looking Ahead" – a radio series for school leaders intended as preparation for the future. The topics covered include physical and emotional development, personal matters, falling in love, starting a family, birth, parental responsibility and making choices. The program also features the views and comments of young people.

2. "Reproduction and Growth" – a series of broadcasts, lasting one whole term, for children between the ages of 10 and 13;
3. "What's It All About" – a television series produced for young people over 14 years old. Each program presents a realistic situation relevant to a young person's life. Someone from the medical profession or a social welfare agency is invited to discuss the situation and suggests sources from which information can be sought. Among the situations covered are unmarried motherhood, early marriage and family roles; and
4. "What Shall We Tell the Children? " – a documentary for parents that discusses how they feel about sex education for their sons and daughters.



Films and Tapes

During the parents-teachers meetings, films and tapes of typical family scenes are also used to demonstrate the easy and natural way for parents to impart sex information to their children. Parents who cannot attend meetings are given helpful materials, such as question-and-answer type pamphlets and textbooks that contain the questions usually asked by children and proper way of answering them.

For teachers, there are notes or brochures/booklets to guide them in the section on personal relationships. The notes include suggested topics for class discussions and contain simple information on the male and female reproductive organs, fertilization and pregnancy, and the right terminology.

SUMMARY

This paper tries to focus attention on some problem areas that hamper the introduction and acceptance of sex education in schools. Hopefully, this would help teachers, administrators and researchers explore and examine existing models, research results and their classroom and field experiences. Sex education is a highly controversial issue. As such, it is widely felt that integrating human sexuality into the population education curriculum will only jeopardize the acceptance of the total population program.

But based on research conducted in the Philippines and elsewhere among parents, teachers and students, there is an apparent need for sex education in school and at home. However, debate still rages on the wisdom of integrating sex education in the population education program.

Most countries with sex education program treat it as a separate subject or integrate it with courses like biology, religion, civics, humanities and social studies. Very few countries, including the Philippines, see the advantage of treating human sexuality as an integral part of the population education program. Opposition to sex education is mostly cultural in nature. Many believe it poses a moral danger to the young by exposing them prematurely to contraception, the genital organs and pre-marital sex. And this is the reason why some authorities insist that the inclusion of controversial topics in population education may only slow down acceptance of the population education program. The alternative suggestion is for the program to concentrate on the demographic, rather than the sexual aspect of the family planning program.

Limited Evaluation

Evaluation of the sex education program has been limited to measuring knowledge of and attitudes towards sex itself and the program. As far as can be gleaned from available materials, no study has so far been done to show the effects of sex education on the fertility behavior of those who have taken the course. It is not difficult to get an objective measurement of the change in an individual's knowledge of sex. It is more difficult to measure attitudinal change because this requires a more sophisticated measurement methodology. To determine change in behavior is most difficult because it entails long-range work. However, the key test for sex education is its influence on sexual and fertility behavior. What is its influence on population control? What is the incidence of pregnancy among unwed mothers who did or did not complete sex education programs? What is the percentage of women and men who attribute their practice of family planning to sex education programs? How has knowledge of reproductive anatomy and physiology helped insure correct contraceptive practices?

An understanding of the factors which have influenced the acceptance or rejection of sex education could be had from an analysis of research results and sex education models in other countries. The analysis was based on various problem areas. Judgments concerning these and similar problem areas will contribute to the formulation of a plan for coming up with an acceptable program of introducing human sexuality in population education curriculum.

I. CONTENT

A. When to Introduce the Subject

A content analysis of existing curricula on human sexuality reveals that there is no agreement as to when sex education should start. Wesleyan College, for instance, starts off its program with Grade 4 students, and the Philippine Women's University and the Science Education Center in high school. However, the Department of Education and Culture sees the need to introduce sex education as early as Grade I. At Wesleyan College the topic of contraceptive methods is considered appropriate for elementary pupils; other schools prefer to defer it until high school. Local KAP studies show that students, parents and teachers seem to agree that the elementary level is the most appropriate time to initiate sex education. But there are significant differences of opinion on exactly when to do so – in Grade 1 or in the upper elementary level. Most of the opposition come from parents who feel their children "are still too young to see, know and mention the sex organs and the reproductive process."

Teachers and supervisors, however, agreed that the topic of genitalia is appropriate for Grade 1 and that contraceptive methods should be taught to students in the upper elementary levels. The reaction of policy planners and researchers was more ambivalent on the teaching of contraceptive methods. They felt the elementary years may not be the ideal time to introduce detailed knowledge of contraceptives. But since most school children in the rural areas drop out before finishing Grade 6, there seems to be no choice but to introduce the subject, with appropriate treatment at each grade level. They recommended that curriculum writers and teachers must insure proper treatment of the topic, in the sense that it should serve as an "eye opener." Its primary goal should be to create an awareness among higher elementary pupils of (1) the various methods to control family size; and (2) the existence of family planning clinics where these methods are easily available should they find a need for them in the future. A detailed discussion of contraceptive methods at this stage is inappropriate because the relevance of this information to the pupils who may quickly forget it is doubtful.

The teachers were agreed that the present topics on human sexuality are sufficient and acceptable both to them and to students. However, the supervisors, policy planners and researchers felt the need for a study on the appropriateness of particular sex topics for students of different age or grade levels. They recommended that an in-depth study be conducted to answer the following questions:

1. How much knowledge on human sexuality do students have at various grade levels?
2. What topics should be introduced at what levels?
3. What topics appeal most to students? What topics do they find boring? Why?
4. What type of training must be given to teachers to make them more comfortable in teaching human sexuality?
5. Who should train the teachers?
6. When can teachers be said to be ready to teach, and students ready to learn, human sexuality?

B. What to Teach

Basically, majority of the sex education programs deal with the same topics, whether primary, intermediate or high school. As in Western countries where sex education starts in Grade 1, the PEP covers the following topics in the primary grades: family relationship differences between boys and girls, and how babies are born. At the upper elementary level or the intermediate grades, the following are developed to help prepare students for adolescence: changes in boys and girls in puberty, human anatomy and reproduction. At the high school level, more emphasis is placed on boy-girl relationships and healthy sexual attitudes, pregnancy, contraception and responsible parenthood.

Parents, teachers and students who were respondents in the KAP studies on sex education also generally concurred that the topics for the elementary level are suitable for their children. They also looked favorably on the aspects of sex topics which are being taught to high school students. The only significant exceptions were the teaching of the scientific terms for the genital organs to Grade 1 pupils and the teaching of contraceptive methods in Grade 4 as prescribed in the Wesleyan College population education curriculum. The studies also revealed that such topics as menstruation, human reproduction, contraception and masturbation are difficult either to teach or to understand. As a result, these topics are least-liked by the class or embarrassing for the teacher to discuss.

The teachers reported varied experiences with the acceptability of what are now regarded as controversial topics on human sexuality. Some teachers said the topics, including menstruation, the genitalia, human reproduction, contraceptive methods and sexual intercourse, gave them no difficulty or embarrassment at all in the classroom. In fact, they pointed out, these topics generate greater interest among students than the topics under demography.

On the hand, some of their colleagues found these topics to be really embarrassing to discuss, difficult to teach and understand, and disliked. But they said these reactions could have been generated by any or all of these factors: (a) teacher incompetence and lack of knowledge on human sexuality; (b) the immaturity and closed-mindedness of some teachers; (c) sexual taboos; and (d) the cultural background of the students.

To help teachers deal with controversial and taboo-laden sex topics, the program professionals recommended the following:

1. A more extensive survey should be conducted to determine students' attitudes or reactions to potentially controversial topics on human sexuality, or topics they consider difficult;
2. Teachers should be given training which emphasizes and develops more positive attitudes, such as openness towards sex. At this training, more competent trainors and authorities on morality should be invited to speak, and more sessions should be devoted to human sexuality;
3. PEP should conduct a survey to determine the terminology which will facilitate acceptance of controversial topics;
4. PEP should provide a session or reading material on value clarification to help teachers deal with questions of morality and discussions on values;

5. Sex topics should be taught along with their social, moral, cultural and technical aspects in the context of wholesome family life; and
6. There should be separate sessions for boys and girls when delicate topics are going to be taken up.

C. How to Teach Human Sexuality

Sex education authorities pinpoint several possible teaching approaches. First, purely factual and scientific. Second, the strong moral approach. Third, teaching all the facts and attitudes and leaving conclusions to the student. Fourth, giving all the facts and attitudes but making a stand and making recommendations.

Some teachers and supervisors believed students should be given all the facts about attitudes on, and the moral implications of, human sexuality – and to be told which to follow. They said this approach is consistent with the policy of the Department of Education and Culture that "good moral values should be renewed, strengthened or inculcated among Filipinos through education." Furthermore a purely factual approach would leave out the moral and emotional aspects, which cannot be dissociated from a purely human experience – sexuality.

On the other hand, a purely ethical approach would leave little of the decision-making to the students. This will serve to thwart the basic goal of population education which is to inculcate in these students the ability to make responsible decisions. The supervisors said this approach would be appropriate because of the fast changing moral code of today's youth. It will also have difficulty reaching students who are bolder and more philosophical in their outlook.

However, other teachers and supervisors proposed that topics which lend themselves to factual treatment should be treated on a strictly informational level; those that require ethical treatment should be taught on a moral level. Also, policy planners and researchers pointed out there is still a need to treat human sexuality in the context of Philippine society, cultures, mores and ethics.

The questions of what is morally right and who is in a position to render moral judgment were also left unresolved. However, both teachers and supervisors recommended that policy planners, the PEP and trainors provide training and reference materials on value clarification to help teachers deal with questions of morality and discussions of values.

In an attempt to resolve the issue, policy planners and researchers drew up a policy statement to the effect that the teaching of human sexuality is more a matter of attitudes than of facts. As such, it should be treated in the context of morality. They further decided that the issue of what is morally right or wrong could be handled by a working group which will draw up a basic position paper to serve as a guide to the ethical and moral considerations in the teaching of sexuality. They said the PEP and this working group could draw on the resources of the following agencies which have this extensive data on moral values and family norms:

1. United Church of Christ in the Philippines;
2. Christian Family Movement;
3. Catholic Marriage Advisory Council;
4. Family Planning Organization of the Philippines;
5. Philippine Women's University;
6. Other local and foreign agencies which have conducted studies on family life and marriage; and
7. The Bible, The Quran and other religious references.

One policy planner suggested: in the spirit of human freedom, emphasis in the teaching of human sexuality should be more on value clarification than on a list of do's and don'ts or on statements of what are morally right or wrong from the perspective of the various religions.

D. Terminology

This is considered one of the most controversial areas in sex education. The dilemma that has long faced teachers and family planning communicators is: should they use scientific terms at the risk of not being understood? Or should they use the popular terms and be accused of vulgarity? Or should they resort to euphemism which will likely result in the miseducation of the students? Perhaps the more crucial questions however are: should there be a standard set of terms based on one of the three categories already mentioned? Which set of terms would be most applicable, most widely understood, and most acceptable in those parts of the country where it will be introduced?

To this problem, the teachers, supervisors, policy planners and researchers recommended the following solutions:

1. There should be use of not just one set of terms but a combination of scientific terms, popular terms and euphemisms. Usage will depend on need. Symbols and terms must be used in their proper context;
2. Local terms which carry negative connotations may be made more acceptable, if they are paired off with their corresponding scientific terms;
3. Studies should be conducted to determine the following:
   (a) What sex terms are commonly used by the different ethnolinguistic groups in the country. What are the equivalents of English sex terms in the local dialects?
   (b) Which sex terms are acceptable to and widely understood by students?
   (c) Which approach is most effective in dealing with the problem of terminology: calling parts and functions by their everyday names? Using euphemisms? using scientific terms?
4. Teachers should be trained to conduct their own inexpensive surveys on terms and approaches which are acceptable in their own areas; and
5. Sex terminology should be legitimized by its exposure through the mass media.

II. TEACHER COMPETENCE

A major problem both here and abroad is the lack of confidence among authorities, parents, students and the teachers themselves in the teacher's competence and readiness to teach human sexuality. They are frankly apprehensive about allowing the teacher to play a major role in the sex education on the youth. The problem can be resolved through the following recommendations:

1. Teachers of human sexuality should have the following qualifications:
   (a) Open-mindedness;
   (b) Emotional maturity;
   (c) Good moral character;
   (d) Knowledgeability in content and methodology;
   (e) Acceptance of the Population Education Program's objectives;
   (f) Intensive training in population education;
   (g) Happily married. If single, he must have had a pleasant and morally upright family life;
   (h) Respect and reverence for sex and institution of marriage; and
   (i) Can communicate sincerely and honestly and must have affection for children.
2. Conduct teacher training. Some supervisors and teachers qualified this, however, by saying that teacher training alone will not insure competence, much less change attitudes towards deeply held values on sex and morality. For them proper attitude and right psychological responses are more important than knowledge on the subject. Thus, to support teacher training and to neutralize teacher incompetence, the following approaches in teaching human sexuality were recommended:
   (a) Team teaching;
   (b) Peer teaching. (Effective only if the

peer is accepted as an authoritative person);

(c) Informal methods of teaching outside the classroom. The atmosphere outside the classroom encourages openness of the discussion of sex; and

(d) Re-orientation of teachers on human sexuality. This includes a number of desensitization activities and lectures to bring about proper attitude such as openness towards sex, and minimize if not eliminate embarrassment among teachers.

Parents Involvement. Studies have indicated that students, parents and teachers themselves have mixed feelings about who is in a better position to teach sex education. Students either feel that the school is the more accurate and authoritative source of sex information since parents cannot provide the right answers to their questions; or that parents should be the first ones consulted on problems of sex, especially if the teachers are not competent enough to handle sex education. Parents also feel that the school is the most appropriate place for their children to get their sex education so long as they are assured of competent teachers. However, some parents feel they are in a better position to teach their children about sex and are even willing to attend sex education courses. Some teachers feel they are not prepared to teach sex. They would rather entrust some aspects, for example, menstruation to parents.

Alternative approaches have been suggested to solve this problem. These are:

1. Crash courses on population and human sexuality should be offered to parents to open their minds and establish a favorable climate for the teaching of these topics to their children;
2. Dialogues, school meetings, seminar-workshops on population education, home visits and sessions on curriculum revision should be organized to get parents involved in the population education program;
3. Printed materials should be distributed to parents, informing them of the school's population education program;
4. Peer teaching should be encouraged to supplement teachers' efforts in population education;
5. Selected parents and other resources persons in the community should be utilized. Also, the possibility of exchanging resource persons and materials among neighboring communities to improve acceptance and effect economy should be looked into;
6. There should be coordination with barrio organizations such as Samahang Nayon, Rural Health Units, DLGCD, barangays, Mothers' Clubs, family planning centers, Rural Improvement Club, Youth Clubs to reach the out-of-school population and to inform parents of what is being taught in school and how they could implement the school's effort; and
7. Use of teaching aids in sex education.

Teachers agree that teaching aids and audio-visual materials help facilitate explanation of controversial topics which are often difficult and embarrassing to present verbally. Audio-visual materials reduce the vulgarity of language and desensitize students through exposure to illustrated material.

The supervisors concurred with the teachers on the helpfulness of teaching aids. Some of them noted, however, that certain materials, particularly flip charts and posters, contain pictures which they consider as vulgar or obscene and inappropriate for children. Inaccuracies in teaching aids, they said, merely compound teacher incompetence. Some supervisors observed that what some teachers say in class are often inconsistent with what the visual materials show or contain.

Policy planners and researchers are strongly aware that resource materials on human sexuality are extremely inadequate to meet the needs of teachers and realize the urgent need to propose steps to solve the problems. These recommendations are:

1. Teachers should be trained in the correct use of teaching aids. To insure that facts and illustrations are presented and described correctly, there should be textual material at the back of flip charts, posters and other visual materials. This is to guide teachers during lectures;
2. The preparation and correct use of teaching aids should be one of the topics in the re-training program for population education teachers. A manual on media production should also be distributed to the teachers to guide them in the preparation of their own teaching aids;
3. A corps of teachers trained in media production should be organized to take care of supplying the needs of their fellow teachers for simple teaching aids by reproducing these materials at the local level. This way teachers will not have to wait for materials from the central office;
4. Basic teaching kits should be sent out to the field for replication and improvisation. These should at least be furnished by the central office, and modifiable to the region where they will be used;
5. Links should be established between the National Media Production Center and the information-education-communication divisions of the Commission on Population's regional offices for media production at the regional level;
6. Teachers should be trained to pre-test and evaluate their teaching aids;
7. The role of mass media in population education must be clearly defined. Areas of coordination between the implementors of program and the mass media should be identified in order to consolidate efforts for a more effective and complementing population education program;
8. A management study should be conducted on the Department of Education and Culture's system of distributing audio-visual materials; and
9. A management study should be undertaken on the research utilization and information dissemination practices of research agencies.

BOHN, COYLENE, And others.

A Study of Teacher Characteristic as Predictor in the Successful Implementation of an Innovative Curriculum. *Texas University, Austin. Research and Development Center for Teacher Education. Office of Education (DHEW), Washington, D.C., Bureau of Research.* 1969. 11 pages; Report series No. 12.

A change that has taken place in the methodology of teaching science — from teaching to impart specific information to teaching how to process information from experience —has led to questioning whether a relationship exists between selected teacher characteristics and success in teaching such a curriculum. Factors of sex, grade level taught, school district, years of teaching experience, and academic preparation in science were examined for significance. A sample of 110 elementary teachers from six school districts were participants in an in-service teacher education program prior to teaching science using the process approach. Student achievement, which was used as an index of teaching success, was assessed by administering the AAS Competency Measure at the conclusion of each exercise. A minimum of six exercises was taught by each teacher. Multiple linear regression analysis showed that the variables of sex, grade level, school district, years of experience, and hours of science accounted for 45% of the variance in the student achievement score. Of these, sex, grade level, and years of teaching experience made significant independent contributions to predicting teacher success.

BURLESON, NOEL-DAVID, And others.

The Time Is Now: Population Education. *A commentary and annotated bibliography. Harvard University Cambridge, Massachusetts. Graduate School of Education.* May 1969. 36 pages.

The commentary which introduces this 72-item bibliography briefly outlines the scope and significance of population education, and comments on a few of the items included. Most of the items have to do with population awareness. Several are geared for direct classroom use, such as teacher's guides, model curricula, etc. Dates of materials included range from 1956 through 1969. The author states that radical change is overdue in education, and population education is only one attempt to bring education into the 20th century.

CUARESMA, CLEOTILDE R.

Attitudes of a select group toward birth control. *Master's thesis, Araullo Lyceum, 1973.*

Two hundred thirty rural folk with ages ranging from 20 to 30 who were either married or unmarried were randomly sampled in this study to identify birth control attitudes of Filipino rural folk in a Nueva Ecija town. An interview schedule utilizing a 20-item attitude scale called "Attitudes Towards Birth Control" was administered to the respondents. Statistical tests revealed that sex and civil status are not determinants of a low or a high acceptance of birth control ideas. Educational attainment is a factor in the development of favorable attitudes towards birth control. The study, therefore, recommended that further studies be made to discover factors that influence the development of people's attitudes towards the family planning movement. Curriculum planners should include more units in population education in courses such as social studies, language arts, and elementary mathematics. School officials should also send more teachers to seminars on family planning and population education.

JAYASURIYA, J.E.

Population Education and the School Curriculum. *Bangkok, Unesco Regional Office for Education in Asia,* 1972.

Provides broad perspectives of population education at the school level by defining the term "population education", discussing the areas it covers, and the problems involved in introducing it into the school curriculum. The objective of a course in population education is to give the learner an insight into the totality of issues connected with population. These issues range from the nature, measurement, causes, determinants and consequences of population growth, both at the macro-level of the community and the nation and the micro-level of the family, to the dynamics of the reproductive process and the possibilities of planning family size and population growth. Population education, therefore, should cover these areas: collection and analysis of population data, population growth and human development, problems of urbanization, psycho-social aspects of human sexuality, the reproductive process, and population planning. In introducing population education into the school curriculum, the following should be considered: (1) The views of parents regarding the advisability or the appropriateness of including certain topics. The best policy would be to act in accordance with parental wishes, introducing topics which are noncontroversial and acceptable. (2) Preparation of teachers to handle population education. Materials given them should be comprehensive and should combine all elements of population education so they could teach the subject with accuracy and confidence. (3) The age levels at which different topics should be introduced and the key concepts to be emphasized at each age level. There has been some amount of controversy regarding the age level at which materials on population education should be introduced. Arguments for introducing population at the elementary level are the high enrolments in the elementary grades (i.e., population education should be introduced in the grades to reach the largest number of children), and the curriculum provides a great deal of flexibility for the introduction of new materials. On the other hand, arguments for the introduction of population education in the secondary level are: curriculum materials are easier to prepare, enrolment is low and hence, the number of teachers required to introduce the subject would be smaller, and secondary school students are only a few years removed from the time they would make decisions regarding marriage and reproduction and therefore a program of population education would be more meaningful to them. (4) The subjects through which topics on and key concepts of population could be introduced. The approach should be to introduce population-related materials through such subjects as literature, history, geography, social studies, mathematics, general science and health education. (5) The lack of relevant research data especially on the issue of motivation. The effective inculcation of the small family norm requires, among others, an understanding of the motivational basis for the large family norm in different socio-cultural groups.

KARPUS, ROBERT

Some Thoughts on Curriculum Development. *Presented at Cubberley Curriculum Conference (Palo Alto, California, May 7-9, 1969).* 11 pages.

Reconciling large-scale use of common materials with the unique nature of each classroom grouping is the central problem of the curriculum developer. Certain generally applicable educational principles can aid in coping with these problems when coupled with empirical testing of all materials with children and/or teachers. But the payoff of curriculum development is what happens to teachers and children in the classroom. Curriculum evaluation is concerned with describing this result. Evaluation studies have to take place when the materials have stabilized. At the same time, however, the studies have to last long enough to examine longitudinal implications. The tradition of educational evaluation has unfortunately concentrated on the achievement of the individual child and has paid no attention to the objectives to which teachers actually use curriculum materials, and the classroom processes through which teachers try to attain these objectives.

LANE, MARY TURNER, AND WILEMAN, RALPH E.

A Structure for Population Education. *Carolina Population Center, University of North Carolina. 1974.*

The purpose of this book is to define a structural framework of *what* to teach rather than *how* to teach as a guide to anyone who wishes to learn about, teach, or plan curricula from first graders through high schoolers. The authors have defined population education as "the study of human population and how it affects, and is affected by, several aspects of life: physical, social, cultural, political, economic and ecological." An extensive literature review of writings of recognized authors, national and international instructional committees and commissions, and existing curriculum guides was undertaken. Graduate students from various countries involved in population and public health studies formed the staff support for what they called the "search of a substance of population education." From the extensive literature review, it was discovered that the literature in population education provided more information on *how* to teach rather than on *what* to teach, and that teachers need the specifics of what population education is before they can teach it effectively. Population education can be integrated into existing study courses in other disciplines such as social studies, economics, science, ecology, geography, humanities, and mathematics. In this regard, a generalized structure for a systematic course in population education from kindergarten through high school, giving attention to scope and sequence, can be drawn up to assist learners, teachers, and curriculum planners. However, population education can also evolve as a distinct field of study, without having to be integrated into any major subject. The authors recommend the adoption (as a framework and not necessarily in toto) of a generalized structure for the systematic study of population. Structure is used here in the Brunerian sense of organizing ideas and concepts essential to understand a particular discipline, as well as those processes generating new knowledge. The book itself contains four parts: (1) an overview of the population phenomena, (2) elements of the structure (goals, generalizations, and behavioral objectives, (3) ways by which the structure can be used in planning courses and bridging the gap between *information* about population and *teaching* about population, and (4) appendices providing annotated materials for the teacher and for the learner, a bibliography of significant readings, and descriptions of population agencies and population education centers. The goals are to develop understanding and attitudes about seven major areas: human reproduction and family planning, family size and standards of living, basic population and demographic terms, population and environment, population and the economy, population policies and programs in this and other countries, and the growing personal and collective effort of the population phenomenon. Supporting each goal are several generalizations — clear-cut statements of the main idea. To help the teacher evaluate whether the generalizations have been internalized by the learner, visible criteria called behavioral objectives are prescribed for each generalization, consisting of observable behavior, i.e., what the learner does to demonstrate his learning, and criterion measures of quantity, quality and time. Language used throughout the structure is cool and rational, carrying as little judgmental value as possible. This does not preclude, however, the importance of value exploration and value clarification in this highly affective field of inquiry.

MILLARE, LEON B.

Five Special Studies on the Teaching of Biology. *Master's thesis, University of Baguio. 1972.*

This study dealt with (1) the objectives, materials and methods of teaching biology, (2) the qualifications of biology teachers, (3) the modes of enriching biology teaching, (4) biology teaching in Asian countries, and (5) biology teaching in the United States as compared with that in the Asian countries. A literature review of biology textbooks, periodicals, and some research studies was employed to gather the needed data. Information gained from the literature review was confirmed and validated by biology teachers and some personnel of the National Science Development Board. Results of the review showed that biology is taught in schools and colleges to develop certain basic objectives and that biology teachers are the vanguard of scientific knowledge. Biology teaching could be enriched through various methods and techniques, but the heterogeneous nature of the learners requires individualized science instruction. In some Asian countries biology is not held in high regard due to a lack in teaching facilities. In others, biology has set the pace for excellence, as seen in recent strides in food production. The United States has excelled all other Asian countries except Japan in all aspects of biology teaching. The study recommended that the objectives and methods of teaching biology in schools be geared towards the checking of world-wide insufficiency of food and that a consortium be established among Asian countries to develop Asian norms, textbooks and laboratory equipment for teaching biology. There must also be some sort of professional exchange among Asian countries and biology teachers must undergo a series of in-service training to foster exchange of biological culture and knowledge.

NATKIN, GERALD L.

Research and Theory on the Effects of Instructional Sequencing. *Bucknell University, Lewisber, Pennsylvania.* Office of Education (DHEW), Washington, D.C. June 1970. 27 pages.

Although previous research has indicated no significant relationship between sequencing of programmed instructional materials and terminal achievement, it is felt that certain conditions might produce such a relationship. In order to test this idea, a hierarchy of word meanings was constructed, in which each definition was dependent on the previous one. The hierarchy was divided into several different linear and scrambled versions according to the amount of memory and information reorganization required to learn the material. The linear and scrambled versions were then administered to two groups of 80 high school students. Factoral analysis of results showed a significant difference in achievement between students using the linear version and those using a scrambled version for the lower degrees of memory requirement. However, there was no difference in achievement at the higher levels of memory requirement. Conclusions were that sequence does have an effect in programmed instruction when a certain optimal memory load is not exceeded, and that further research should be done on the learning mechanisms involved in programmed instruction.

PAISLEY, WILLIAM

Sources of Information on Social Issues: Education, Employment, Public Health and Safety, Population, etc. *A brief guide for journalists and others. An occasional paper from ERIC at Stanford. Stanford University, California. ERIC Clearinghouse on Educational Media and Technology.* Office of Education (DHEW), Washington, D.C. 36 pages.

An introduction which explains the value of information centers in aiding the flow of knowledge in person-to-person communication of information is followed by references to print sources and information centers. Print sources, listed to show continuity in the "people-print-people" cycle, are offered on the subjects of education, public health and safety, business, labor, employment, economics, and government. In addition, the directories of the National Referral Center for Science and Technology, which lead the search to other sources of information, are described. Information critics are listed according to the same subject areas as the above print sources. Each reference contains a brief descriptive passage.

Population and Family Education. *Book II. Draft sample. Instructional Materials, Social Studies. United Nations Educational, Scientific, and Cultural Organization, Bangkok, Thailand.* Regional Office for Education in Asia, 1972. 142 pages.

Produced by participants at the UNESCO Regional workshop on Population and Family Education held in Bangkok, Thailand, in October 1970, the instructional materials intended for elementary and secondary students are to be considered sample first draft materials usable for reference by groups responsible for designing population education curricula in individual countries. The objective is to help students become aware of the advantages of family planning in terms of better health, inter-personal relationships, and quality of life for the welfare of not only the family but also the community and the nation.

SHAVER, JAMES P.,
AND LARKINS, A. GUY

The Analysis of Public Issues: Concepts, Materials, Research. *Final report. Utah State University. Logan Bureau of Educational Research, Office of Education (DHEW), Washington, D.C., Bureau of Research.* October 1969. 304 pages.

This social studies report presents the results of curricular research to develop a set of "critical thinking" concepts appropriate for the analysis of political - ethical public issues, and to prepare materials and suggestions for teaching those concepts. The analytic concepts, presented in both outline and narrative form, are: the nature of decisions about public issues, the need for order, the nature and importance of language, arguments over words, disagreements over facts, and disagreement over values. Thirty-three "teaching bundles" detail suggestions for teaching these concepts. The report also describes efforts to repeat and extend the research of the Harvard Project, which investigated the effects of two teaching styles (Socratic and recitation) and the interactions of student personality with teaching style in affecting learning.

SIDNEY, LESTER

Redefining the Social Studies Curriculum. *ERIC, Ateneo de Manila University, Diliman, Quezon City, and Population Center Foundation, South Superhighway, Makati, Rizal.*

The author makes several observations on the hodgepodge nature of current social studies programs and the lack of functional statements of the means and ends of social studies education. He offers a functional definition: social studies is that portion of the general education curriculum the purpose of which is to make students more rational with regard to human behavior and social interaction. The author interprets the criterion of rationality of the terms "social interaction" and "general education", and points out the usefulness of this definition for teachers and curriculum designers in making decisions about what they do.

STEGNER, ROBERT W.

Characteristics of a Model K-12 Population Education Program. *Paper presented at the College and University Meetings, National Council for the Social Studies, New York, N.Y.* November 24, 1970. 10 pages.

The Population Curriculum Study of the University of Delaware proposes a school program to develop a comprehensive knowledge and understanding of man in his environment. The central theme of the study is: Man is part of a natural system, and is ultimately subject to the limits of the system. Population education should not merely be training to bring about a decline in the population growth rate but rather should serve as the central theme of the entire educational enterprise, encompassing the needs and behavior of man, his population and his environment, and the interactions of these forces. Using this definition, many aspects of population education can already be identified in existing school programs. Existing curricula have a good deal of content that are related both directly and indirectly to population-environment studies, which can be used without disruption of existing programs. To prepare a population-environment education program under these circumstances, the first need is a conceptual scheme outlining the program. This conceptual scheme should be L-12, multi-disciplinary, and problem-solving in approach. Obviously, population problems cannot be solved in the schools, but the schools can help students to attain concepts of the natural systems, for democratic decisions.

VIEDERMAN, STEPHEN

Developing Education Programs on Population Awareness. *American Association of Colleges for Teacher Education, Washington, D.C., Organization of American States, Washington, D.C., Department of Educational Affairs.* 20 October 1970. 11 pages; Paper presented at Conference on Education and Environment in the Organization of American States, american Association of Colleges for Teacher Education, Washington, D.C. October 20, 1970.

Speakers on population often refer to the population explosion with an air of crisis. However, it is questionable that the invocation of doomsday images is defensible for educators. The goals of population education are to develop an understanding of the impact of population characteristics on national development as well as on the individual, and to develop informed individuals who will make responsible decisions. More than 20 countries are now developing population education programs which will require the creation of a population unit or cell within these countries' educational system. The final decision is whether population concepts should be introduced through the existing curriculum. Population learning will probably be more effective if children are presented with population material throughout their entire school careers. Social studies offer particularly fruitful areas for population learning. Population study should be part of teacher training.

VIEDERMAN, STEPHEN

Population Education in the United States. Preliminary Report to the Commission. Population Growth and the American Culture. *Population Council, New York. May 27, 1971.* **18 pages.**

This report is primarily a statement of needs which will hopefully be used as a basis for formulating a national policy that places a high priority on population education. It sets forth a definition of population education, its relationship to other parts of the curriculum, general content and objectives, and some observations on the present status and future directions of population education in the United States. Throughout, there is an emphasis on population education as a process of understanding population characteristics, processes, and changes, and the interaction of these phenomena with individual lives — as opposed to viewing it solely as the cause of environmental degradation. The report concludes with a memorandum to the Commission on Population Growth and the American Future setting forth the specific efforts that increased funding might support. These include: research and development centers, materials development, teacher-training programs, and model programs.

The appendix contains a preliminary list of available instructional materials and children's books, as well as a list of institutions concerned with population education.

VIOLETA, SALVACION
VILLAFLORES

An Ecological Study of Four Microhabitats (grassland, brush, cultivated and forested areas) with a Proposed Resource Unit on Ecology for Grade Six. *Master's thesis, Silliman University.* June 1972.

The objective of this thesis was to study an ecosystem typical of a barrio and town elementary school in the Philippines, and to use the data gathered and the data collection method in building a teaching unit in ecology for Grade 6. Values of light intensity, pH (acidic or alkaline), temperature, and moisture of the soil, the relative humidity and biotic factors of the environment were measured during a fieldwork of the Biology Garden of Silliman University between December 23, 1971 and February 27, 1972. Observations of patterns related to plant and animal stratification, distribution and inter-relationships of the living and non-living components of the microhabitats studied were made. Results showed that the general physical conditions of the area studied were similar. However, marked differences were observed. The grassland was acidic, the forested areas had alkaline soil, the cultivated and brush areas had slightly acidic soil, and the number of animals in the cultivated and brush areas was less compared to those in the grassland and forest. This thesis did not give recommendations; instead it proposed a resource unit on ecology for Grade 6.

WAYLAND, SLOAN R.

Issues and Problems in Introducing Population Education. *Bangkok, Unesco Regional Office for Education in Asia. 1972.*

The problems and issues involved in introducing population education into the school curriculum have been organized under six basic questions. They are: (1) Why should population education be considered for inclusion in the school curriculum? (2) What specific aspects of the proposed new subject area are most appropriate for the school system? [The following elements should be considered: the nature of the learner, characteristics of the relevant bodies of knowledge – social science, mathematics, biology, ecology, family life and sex education, goals of population education, and structure of the educational system.](3) What changes would have to be made in the existing features of the educational system to establish the new program on a sound and continuing basis? [Some of the necessary measures are: modification of the pre-service training of teachers, in-service education of those who are already teaching, work with supervisors and inspectors to insure implementation of the new program, and establishment of effective feedback from teachers to facilitate the identification of problems in the field.] (4) Are the expected outcomes commensurate with the investment of time, personnel, and resources that will be required? (5) What steps need to be taken to introduce the changes? [The following ground research; assessment of available work concerning knowledge, attitudes and practices; survey of existing curriculum and syllabi; identification of general curriculum reform efforts; use of pilot projects to perfect a new approach before introducing it on a national scale; building public and professional support; training of professional leadership; development of basic reference books; collaboration with other public and private organizations.] (6) Are the resources that are needed to effect introduction of population education available or can they be made available?

ABOUT THE AUTHOR:

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